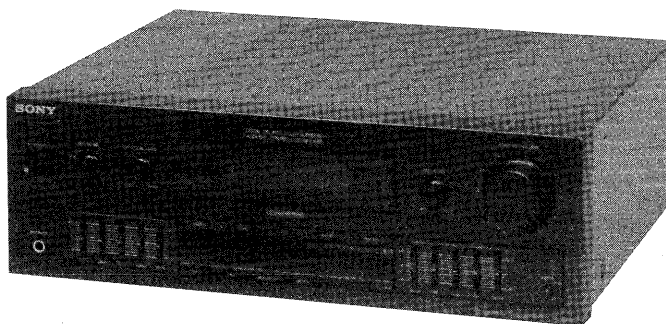


TA-AV411

SERVICE MANUAL

US Model



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads, both channels driven, from 40 - 20,000 Hz; rated 135 watts per channel minimum RMS power, with less than 0.9% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Power bandwidth (IHF)

30 Hz - 30 kHz (8 ohms)

Dynamic headroom 1.7 dB (*78 IHF)

Harmonic distortion Less than 0.9% at rated output (Surround OFF)

Frequency response PHONO: RIAA equalization curve
CD, VIDEO, TUNER, TAPE:
30 Hz - 30 kHz ± 3 dB

Surround output 15 W + 15 W (8 ohms)

Damping factor 27 (8 ohms, 1 kHz)

Input

Input jack	Jack type	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	Phono	3.0 mV	50 kohms	71 dB 75 dB* (A, 3.0 mV)
CD, VIDEO, TUNER, TAPE	Phono	250 mV	50 kohms	92 dB 83 dB* (A, 250 mV)

*78 IHF

Output

TAPE (REC OUT)	Phono jacks	Voltage 150 mV Impedance 1 kohm
SPEAKERS	-	Accepts speakers of 8 - 16 ohms
HEADPHONES	Stereo phone jack	Accepts low and high impedance headphones.

GRAPHIC EQUALIZER controls

Boost/Cut range:

± 8 dB (100 Hz, 330 Hz, 1 kHz, 3.3 kHz)

± 6 dB (10 kHz)

General

Power requirements

120 V AC, 60 Hz

Power consumption

250 W

AC outlets 3 switched, 120 V/1 A max.

Dimensions Approx. 430 x 145 x 360 mm (w/h/d)
(17 x 5 $\frac{5}{8}$ x 14 $\frac{1}{8}$ inches)

Weight Approx. 9.9 kg (21 lb 14 oz)

Accessories supplied

Remote Commander RM-U212 (1)
Sony batteries SUM 3(NS) (2)

Design and specifications subject to change without notice.



INTEGRATED STEREO AMPLIFIER
SONY[®]

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- 1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- 2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

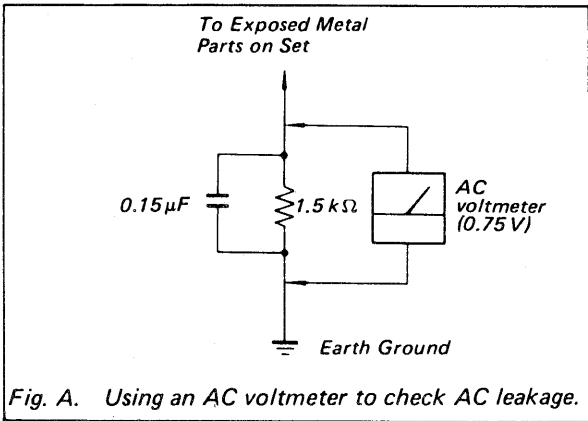


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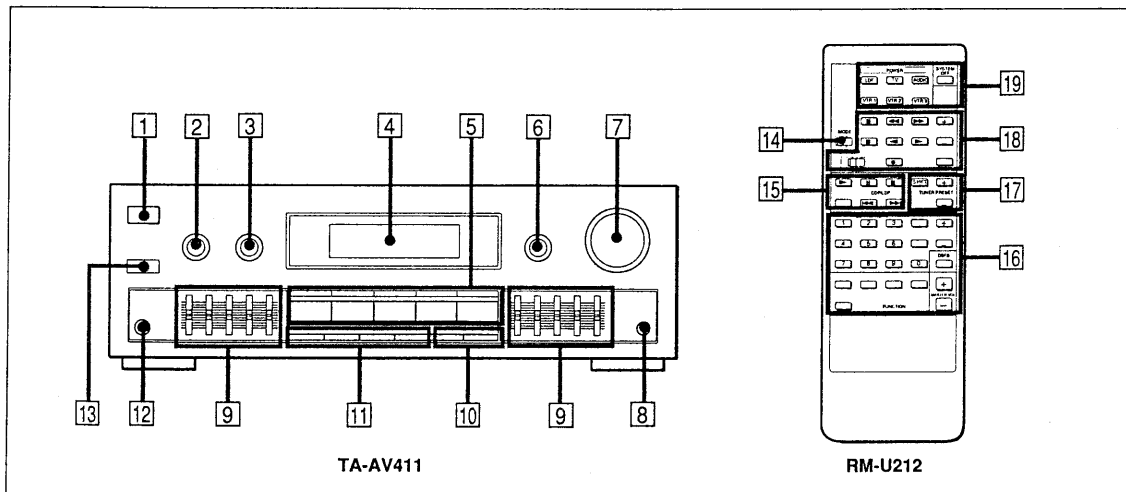
SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1

GENERAL

This section is extracted from instruction manual.

1-1. Location and Function of Controls



Amplifier

1 SYSTEM POWER switch

When the SYSTEM POWER switch is turned ON, the settings on the display panel are automatically reset to the original setting.

2 SPEAKERS selector

3 INPUT BALANCE control

4 Display window

5 Function selectors

6 BALANCE control

7 MASTER VOLUME control

8 DBFB switch

9 Graphic equalizer controls

10 REAR LEVEL buttons

11 SURROUND MODE selectors

12 HEADPHONES jack

13 Remote control sensor

Remote Commander

14 MODE selector

Selects the function mode on the remote commander.

- 1: To select the function indicated in light gray such as DECK, DAT, CD player and surround mode of amplifier.
- 2: To select the functions indicated in blue such as VTR, LDP (Laser disc player) and TV.

15 CDP/LDP control section

The combined CD/LD player can be controlled with LDP position.

- ▶: Play
- ⏸: Pause
- : Stop
- D (disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
- ◀◀/▶▶: Manual search (only for LD player)
- ◀◀/▶▶: Locates a desired selection.

16 Amplifier/TV section

TV/VIDEO button: Selects the input signal of the TV. (for TV)
Program number (1 to 0) and ENTER buttons: Select the channel. (for TV)

SURROUND mode selectors (for the amplifier)

ON/OFF: Turns on/off the surround mode.

MODE: Selects the surround mode.

FUNCTION selectors: Select an input source of the amplifier. (for the amplifier)

REAR VOL /TV VOL +/- buttons: Control the volume of rear speakers (surround level) or TV.

DBFB button: Turns on/off the DBFB (Dynamic Bass Feed Back). (for the amplifier)

MASTER VOL +/- buttons: Control the amplifier volume. (for the amplifier)

17 Tuner/TV section

SHIFT and TUNER PRESET/ TV CH (channel) +/- buttons:

Select a preset channel of the tuner or a channel of the TV.

18 Tape deck/VCR control section

DECK/VTR selector

DECK A,B, and DAT: Selects A,B, or DAT deck.

VTR 1, 2, and 3: Selects VCR type.

(1: Betamax VCRs, 2: 8 mm VCRs, 3: VHS VCRs)

- ⏸: Pause
- : Stop
- ◀◀/▶▶: Fast winding
- ◀/▶: Play
- (REC): Recording

ANT (antenna) TV/VTR button: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.

VTR CH (channel) +/- buttons: Select channel on the VCR.

19 Power control section

SYSTEM OFF button: Turns off the power of the whole system: LDP, VTR, TV, and AUDIO.

LDP/VTR1/VTR2/VTR3/TV/AUDIO POWER buttons: Control the power of each unit. (The VTR button can be operative only

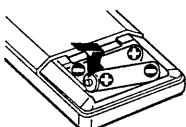
Installing Batteries

1



2

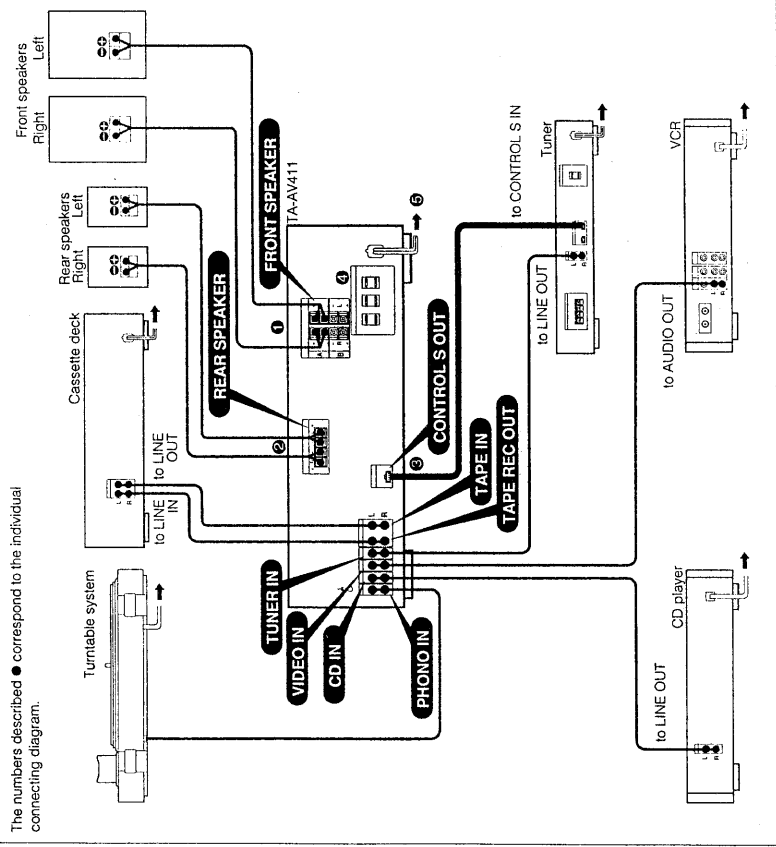
Two size-AA (R6) batteries



Connections

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for the left channel (L).
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- The + and - cords of the speaker systems should be correctly connected to the + and - terminals of the amplifier respectively.

The numbers described ● correspond to the individual connecting diagram.



1 Front speakers
You can connect two pairs of speaker systems: system A and system B. They can be selected individually or simultaneously with the selector on the front panel.

2 Rear speakers
Connect a pair of rear speaker systems for enjoying surround sound.

3 Flat remote control cord (not supplied)
Connect to the CONTROL S IN jack of other Sony equipment with the flat remote control cord for whole audio system remote control.

4 AC OUTLETS (SWITCHED)
Use these to power audio components whose power consumption is less than the wattage indicated on the AC outlets. These outlets are controlled by the POWER switch.

CAUTION
Do not connect any electrical home appliances such as an electric iron, fan, TV or other high wattage equipment to these AC outlets.

5 Power cord
Connect to a wall outlet.

6 To disconnect.
Push in until it clicks.

Note on speaker impedance and power capacity
This amplifier is designed to work best with speakers of nominal impedance from 8 to 16 ohms. Be sure to use a speaker system with adequate power handling capabilities.

To connect a video tape recorder
Use the following cables.

For stereo video tape recorder
RK-C74 phono plug x 2 – phono plug x 2
For monaural video tape recorder
RK-G105 mini plug x 1 – phono plug x 2
RK-C72 phono plug x 1 – phono plug x 2

Listening to a Program Source

1 Press the **SYSTEM POWER** button.

2 Select the speaker system. Turn the **SPEAKERS** selector to **A**, **B**, or **A+B**.

3 Select the program source. Press the **VIDEO**, **TAPE**, **CD**, **TUNER**, or **PHONO** button.

4 Play the program source. Press the **Turntable system**, **Tuner**, **CD player**, **Tape deck**, or **Video deck** button.

5 Adjust the volume level. Turn the **MASTER VOLUME** knob.

Selecting the speaker system

To drive speaker system A: Set **SPEAKERS** to 'A'.
To drive speaker system B: Set **SPEAKERS** to 'B'.
To drive both speakers: Set **SPEAKERS** to 'A + B'.
For headphone listening only: Set **SPEAKERS** to 'OFF'.

Notes

- When **SPEAKERS** is set to 'A + B', two pairs of speaker systems must be connected. Otherwise, no sound can be heard.
- The sound of rear (surround) speakers are not heard from the headphone.

Enjoying Surround Sound

1 Select the surround mode. Press the **DOLBY**, **HALL**, **EMULATED**, or **OFF** button.

2 To adjust the rear sound level. Move the **REAR LEVEL** slider to **+** to enhance or **-** to attenuate.

The surround sound will be effective when surround speakers (optional) are connected to the **SURROUND SPEAKER** terminals on the rear panel.

Location of the rear speaker systems

Front speaker systems

Rear speaker systems

Selecting surround modes

DOLBY (Dolby Surround)

Expands sound just like listening to it in a movie theater.

HALL (Hall Surround)

Provides reverberation effect that is produced in a concert hall.

SIMULATED (Simulated Surround)

Gives a simulate stereo effect to monaural sound.

OFF (To disable surround effect)

The normal sound without surround effect will resume.

Note

No sound will be heard from the surround speakers, unless one of the Surround modes is selected.

Adjusting the INPUT BALANCE control
In the **DOLBY SURROUND** mode adjust this control so that the (audio) volume of the surround speaker is minimized during the scene of conversation (where the sound is monaural).

Recording

1 Select the program source other than **TAPE**. Press the **VIDEO**, **TAPE**, **CD**, **TUNER**, or **PHONO** button.

2 Play the program source. Press the **Turntable system**, **Tuner**, **CD player**, **Tape deck**, or **Video deck** button.

3 Set the tape deck in the recording mode. Press the **Tape deck** button.

You can record any program source using a tape deck connected to the **TAPE** jacks. The **BALANCE**, **VOLUME**, **GRAPHIC EQUALIZER** controls and the **DBFB** switch have no effect on recording.

SECTION 2

DIAGRAMS

2-1. Description on IC101 (μ PD75206-717-3BE)

Pin	Port	I/O	ACT	RESET	Outside	
1	RESET	I				DIGIT9
2	t0	O	H	High	L	DIGIT8
3	t1	O	H	High	L	DIGIT7
4	t2	O	H	High	L	DIGIT6
5	t3	O	H	High	L	DIGIT5
6	t4	O	H	High	L	DIGIT4
7	t5	O	H	High	L	DIGIT3
8	t6	O	H	High	L	DIGIT2
9	t7	O	H	High	L	DIGIT1
10	t8	O	H	High	L	NC
11	t9	O	H	High	L	DBFB
12	t10	O	H	High	L	FRONT MUTE
13	t11	O	H	High	L	REAR MUTE
14	t12	O	H	High	L	DRLC CONTROL
15	t13	O	H	High	L	DRLC SW A
16	t14	O	H	High	L	DRLC SW B
17	t15	O	H	High	L	- 30V
18	Vload		-	High		- 4V
19	Vpre		-	High		NC
20	s9	O	H	High	L	SEG9
21	s8	O	H	High	L	SEG8
22	s7	O	H	High	L	SEG7
23	s6	O	H	High	L	SEG6
24	s5	O	H	High	L	SEG5/KEY OUT5
25	s4	O	H	High	L	+ 5V
26	V _{DD}			High		SEG4/KEY OUT4
27	s3	O	H	High	L	SEG3/KEY OUT3
28	s2	O	H	High	L	SEG2/KEY OUT2
29	s1	O	H	High	L	SEG1/KEY OUT1
30	s0	O	H	High	L	KEY IN 1
31	p00	I	H	In	L	KEY IN 2
32	p01	I	H	In	L	

High : High - impedance status

In : Input status

Pin	Port	I/O	ACT	RESET	Outsided	
33	p02	I	H	In	L	KEY IN 3
34	p03	I	H	In	L	KEY IN 4
35	p10	I	H	In		RM - 1
36	p11	I	H	In		RM - 2
37	p12	I	L	In		DRLC SW
38	p13	I	L	In		POWER SW
39	p20	O	H	In	L	ST LC7535/LC7822
40	p21	O	L	In	L	ST LV1001M
41	p22	O	H	In	L	SV MSM59371
42	p23	O	H	In	L	VOL +
43	p30	O	H	In	L	VOL -
44	p31	O	H	In	L	VIDEO A
45	p32	O	H	In	L	VIDEO B
46	p33	O	L	In	L	TC PAUSE/PRO LOGIC
47	p60	O	H	In	L	STOP
48	p61	O	H	In	L	CLOCK
49	p62	O	H	In	L	DATA
50	p63	O	H	In	L	FRONT SP relay
51	p40	O	L	In	L	RECOU SW V1
52	p41	O	L	In	L	RECOU SW V2
53	p42	O	L	In	L	RECOU SW TAPE
54	p43	O	H	In	L	POWER RELAY
55	ppo	O	H	In	L	REAR SP relay
56	x1					
57	x2					
58	Vss					
59	xt1					
60	zt2					
61	p50	O	H	In		DRLC READY
62	p51	O	H	In		MIX SW
63	p52	O	H	In		DOLBY SW
64	p53	O	H	In		SIM SW

High : High-impedance status

In : Input status

2-2. Key operation

Key input has priority over serial input.

(1) Setting

KEY OUT KEY IN	S0	S1	S2	S3	S4
P00	PHONO	TUNER	CD	TAPE	VIDEO01
P02	DBFB	DELAY	DOLBY	HALL	SIMULATED

Note 1. SURROUND ON/OFF.

(2) FUNCTION Key (PHONO,TUNER, CD, TAPE, VIDEO1-4) operation

These keys execute operations below when pressed.

FUNCTION ICSerial data

REC OUT SWStatic data

VIDEO SWStatic data

FRONT MUTEOne shot

REAR MUTEOne shot

(3) REAR MUTE PORT

The port is turned to "H" by switching to SURR ON, MODE or FUNCTION.

(Key input, Serial input)

Also the port is "H" three seconds after POWER ON is selected.

REAR MUTE PORT has priority over other ports to output when POWER OFF is selected and operates when SUB VOLUME is turned to ∞ .

However there is no output for the port switching the main FUNCTION when DRLC ON is selected.

(4) DRLC CONTROL PORT (used for SP relay too)

The port is turned to "H" only when DRLC ON is selected. (Key input, Serial input)

(5) POWER RELAY PORT

The port is turned to "H" when either POWER ON or DRLC ON is selected. (Key input, Serial input RM-1, RM-2) Both MAIN and SUB are turned OFF when ALL OFF serial input is selected.

(6) DOLBY PORT

The port is turned to "L" HALL or SIM is selected. (Key input, Serial input)

(7) SIM PORT

The port is turned to "L" when SIM is selected. (Key input, Serial input)

The relation between Switch ON and FUNCTION

SW	TA-AX311/AV411
1. PHONO	10000001
2. TUNER	01000001
3. CD	00100001
4. TAPE	00010000
5. VIDEO 3	none
6. VIDEO 2	none
7. VIDEO 1	00000011
8. VIDEO 4	none

Serial data to SURR IC (LV1001M)

The delay time is controlled with 8-bit data (short mode).

The delay time is decided by the count time.

(Address data) - FFFF (short mode)

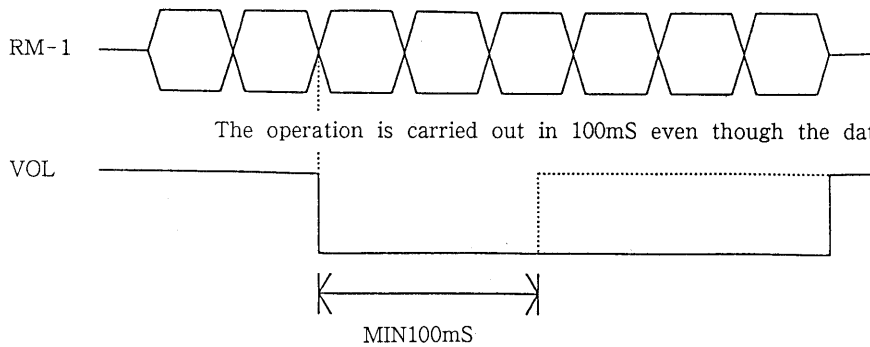
15mS8AB0h

20mS63C0h

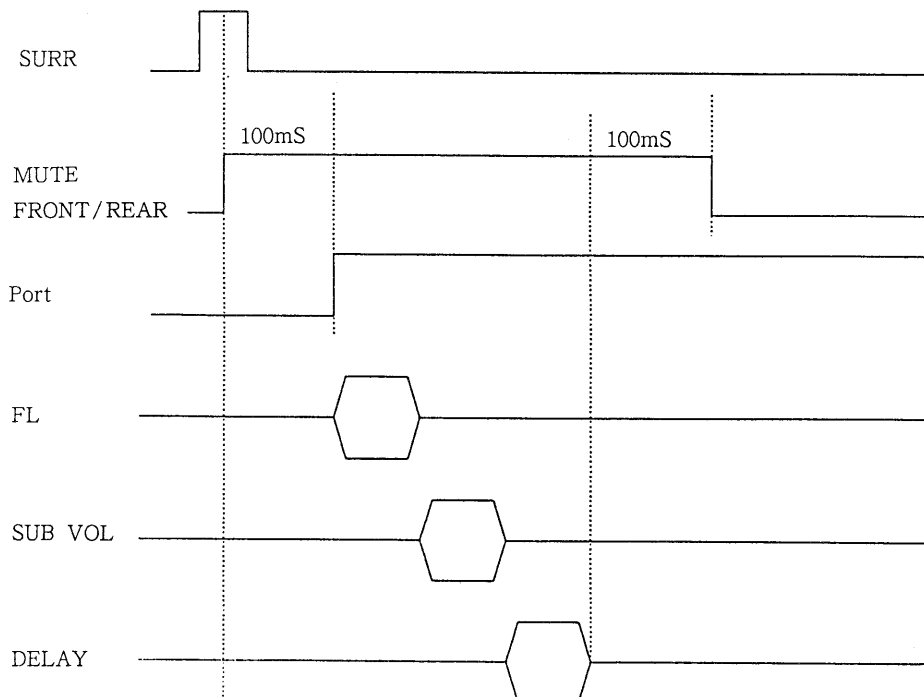
30mS15A0h

Timing chart

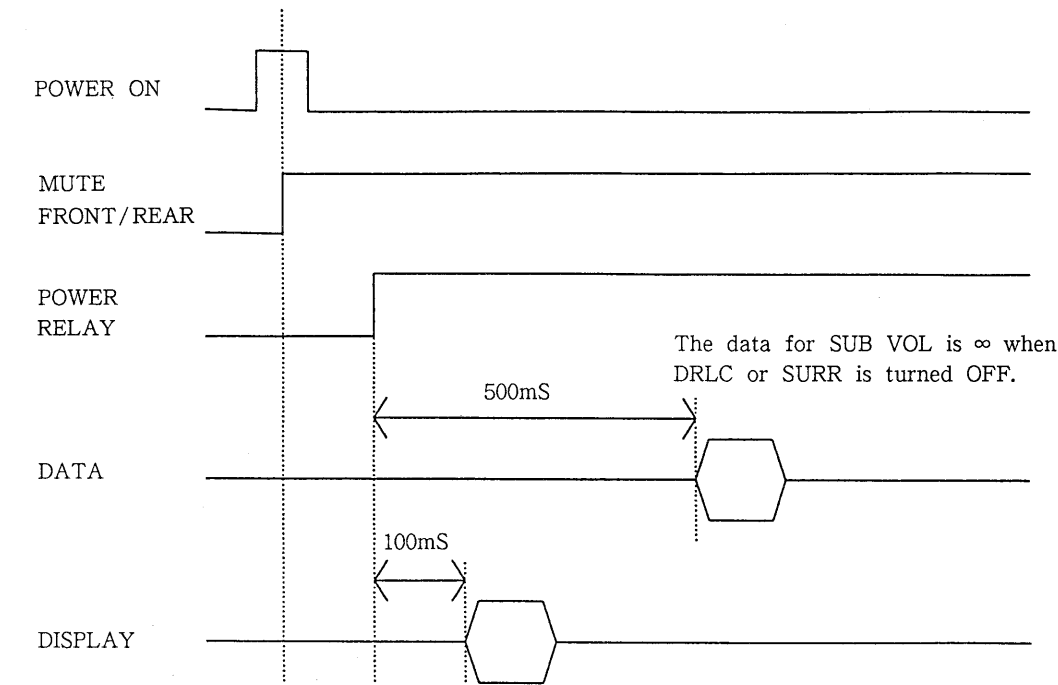
VOL + / -



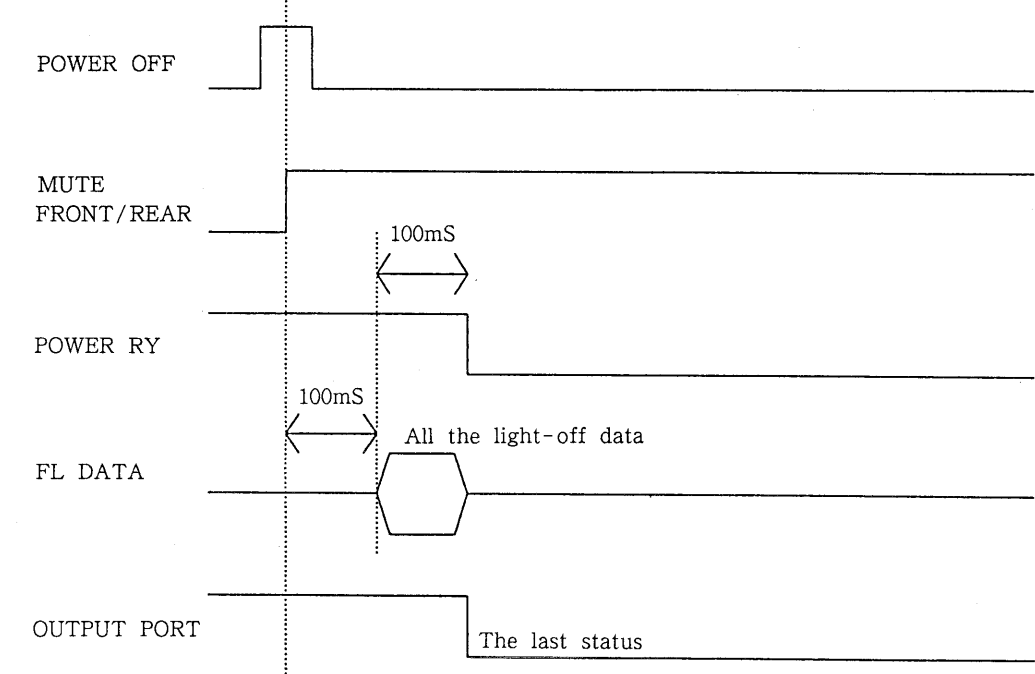
MUTE must be switched 100mS forward or backward during SURR MODE switching (including SURR/OFF switch).



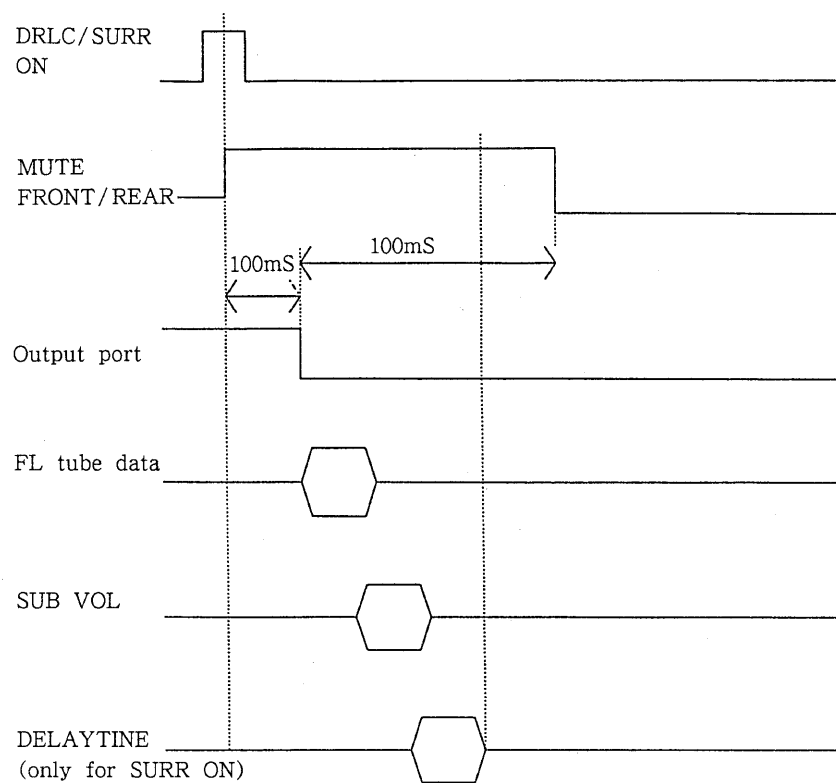
POWER ON (The same operation when starting the buck up system.)



POWER OFF

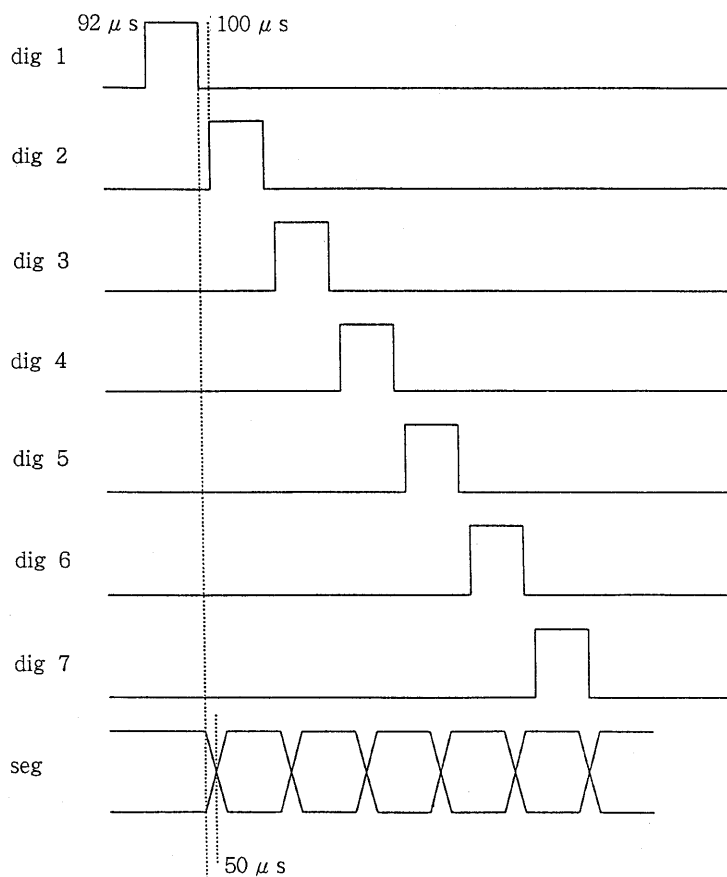


DRLC ↔ SURR mutual switching

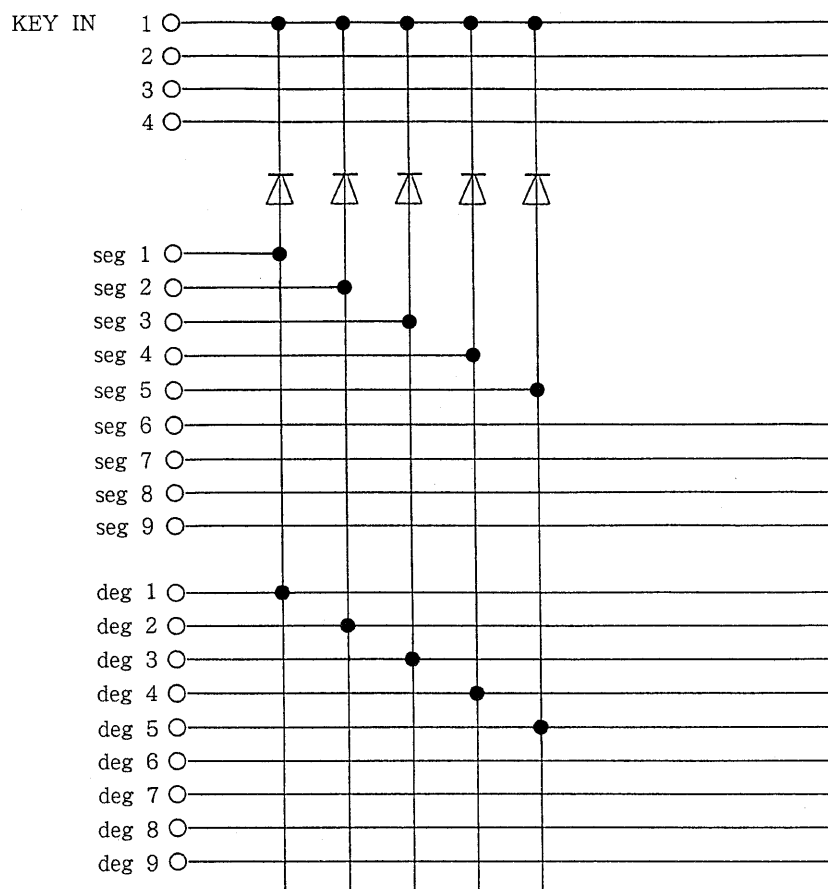


Display operation

1. FL tube start timing



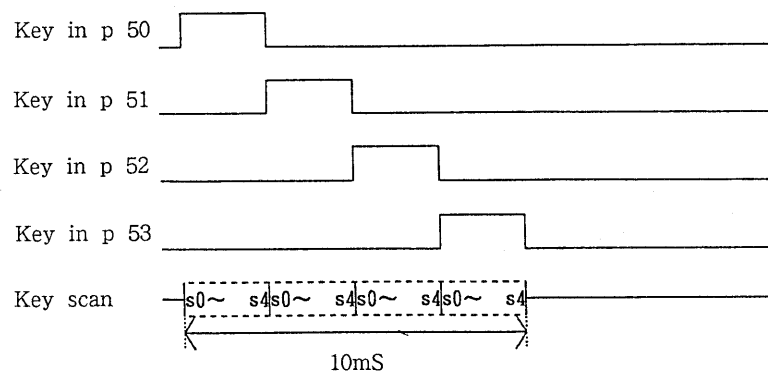
2-3. MATRIX for FL tube and KEY IN



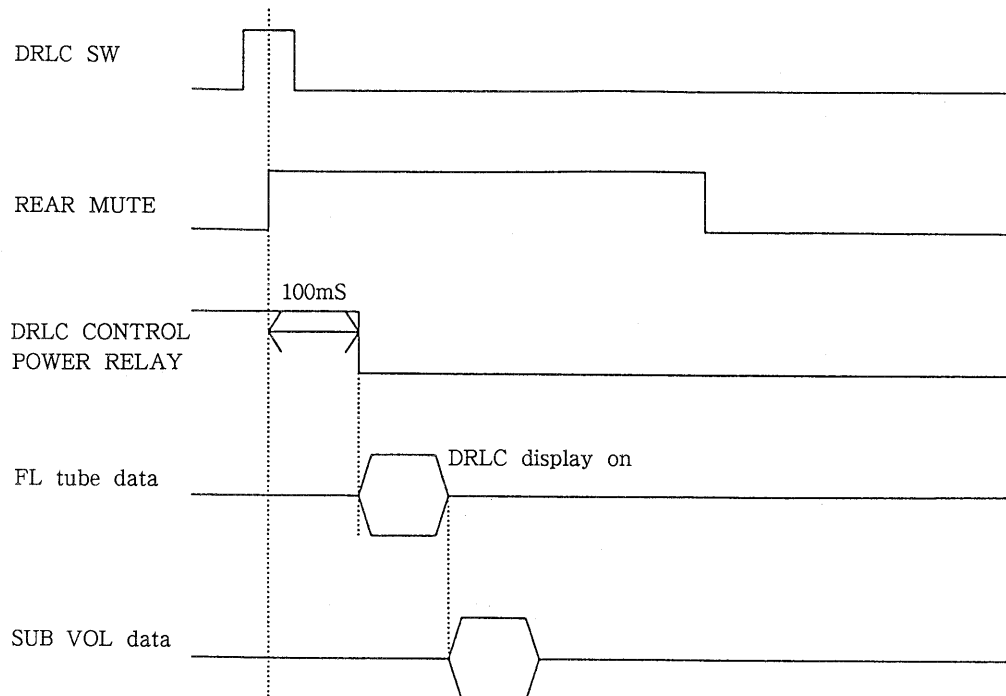
Key scan operation

- ① Key input has priority over serial input.
- ② If a key is input 10mS after the same key was input, this is recognized as a key input and registers five times.
- ③ Double-pressing is not accepted, one pressing first and being replaced by a second has priority.
- ④ No keys can be input during POWER OFF.
- ⑤ No keys can be input for 1 Second after POWER ON.

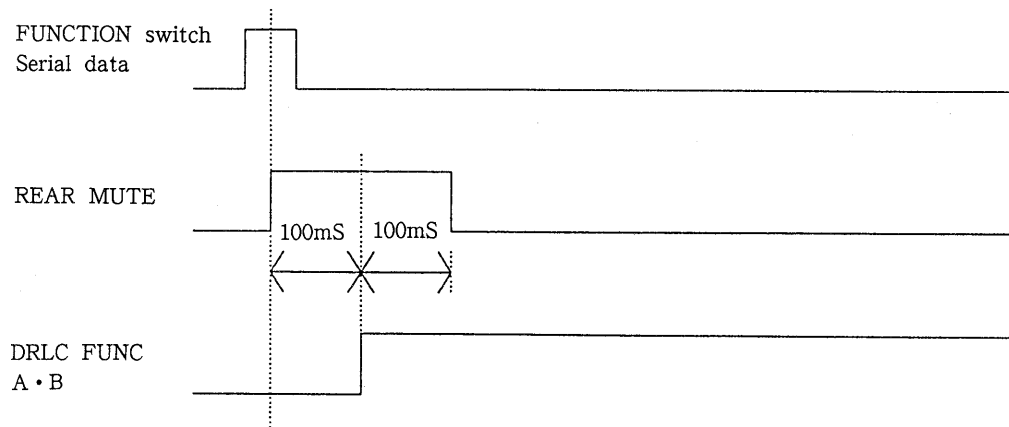
Key scan operation



Timing chart
DRLC



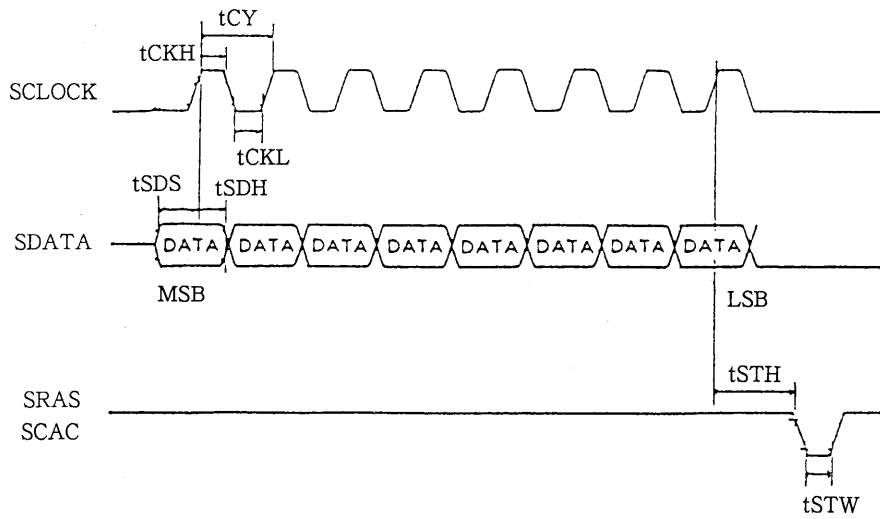
DRLC FUNCTION



2-4.Description on IC303 (LV1001M)

Pin No.	Explanations
1	De-couple capacitor for threshold voltage
2, 64	Capacitor for smoothing of rectifier output
3	Capacitor for sliding band filter and Delayed output
4, 62	Capacitor for sliding band filter
5, 61	Capacitor for pre-emphasis
6, 60	Input filter for rectifier
7, 57	Input filter for rectifier
8	Reference voltage
9	Reference voltage
10	Mute control
11	Vcc
12	Output for V _{DD}
13	Clock input for serial input, data input for parallel input mode
14	Data input for serial input, data input for parallel input mode
15	Column address selection for serial input, data input for parallel input mode
16	Row address selection for serial input, data input for parallel input mode
18 to 32	Connection to memory device
24	Vss
33	X'tal resonator for oscillator
34	X'tal resonator for oscillator
35	Long or Short mode selection
36	Serial or Parallal mode selection
37	For test mode
38	Smoothing for NR rectifier
39	Smoothing for NR rectifier
40	Capacitor for weighting on side chain path
41	Input for variable resistor
42	NR output
43	7kHz low pass filter output
44	Input for NR
45	Capacitor for de-couple on NR
46	Delay output or NR output
47	Input for mute circuit
48	Output for mute circuit
49	Output for 7kHz low pass filter
50	Input for 7kHz low pass filter
51	GND
52	Input for right channel
53	Input for left channel
54	Capacitor for de-couple on Fixed matrix output
55	Noise shaping and delay input
56	Noise shaping output
57	Delay input signal mode select switch (L + R/L - R)
58	Filter for supply voltage on comparator
63	Capacitor for sliding band filter and local decoder output

Input Address Port Timing SHORT MODE

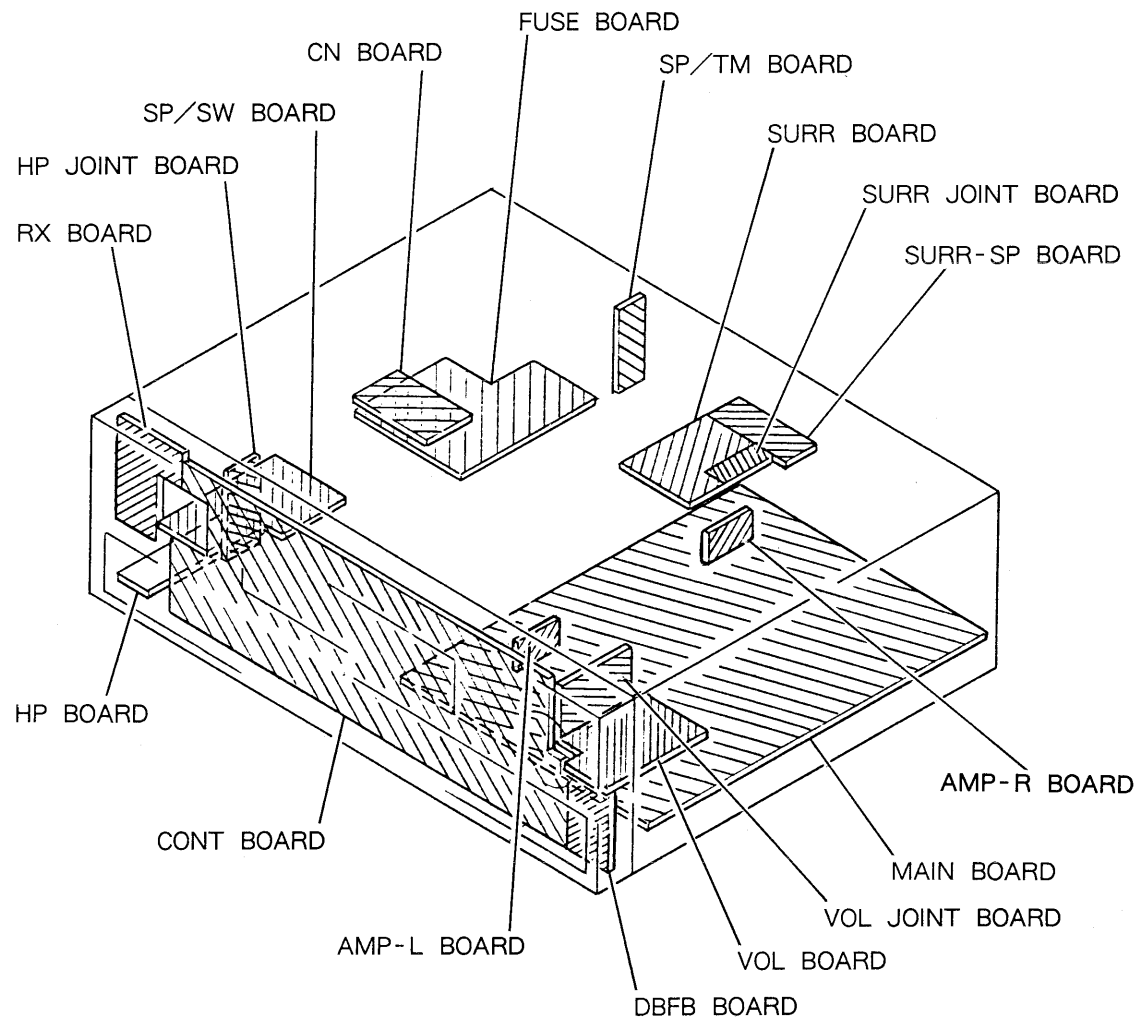


In case of short mode, delay time setting is set in above timing. The date loaded to SDATA is written on the leading edge timing. In order to select that the data latch for row address strobe or column address strobe is loaded, SRAS or SCAS port is controlled.

When changing delay time setting, meaningless data on a memory are read. this causes the pop noise. when SRAS or SCAS is controlled, mute circuit (pin 55 is input, pin 56 is output) is activated. Mute time is the same as the delay time which is set at that time. (Serial data input mode only, On parallel data input mode, mute circuit is activated by using the mute control port pin 18.)

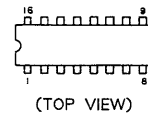
On long mode, input data number is 9, the way of setting delay time is same.

2-5. CIRCUIT BOARDS LOCATION

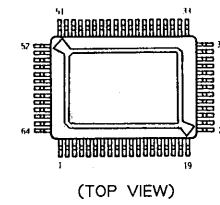


2-6. SEMICONDUCTOR LEAD LAYOUTS

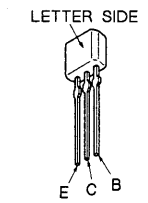
CXA1100P
CXA1198AP
M5226P
TC4051BPHB



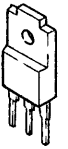
μ PD75206GF-717-3BE



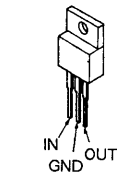
2SA1175-HFE
2SC2785-HFE



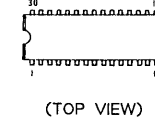
2SA1684-LK
2SC4431-LK
2SD2012



M5F7805L
M5F7812L



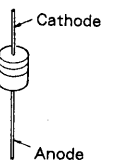
LC7822



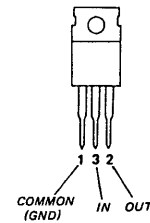
DTA124ES
DTA144ES
DTC114ES
DTC124ES
DTC144ES
2SC2603-FE



HZS6C3L
HZS6C2L
HZS30-1L



M5F7912L



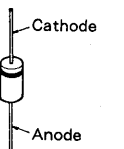
IR2E31A



2SK246-Y



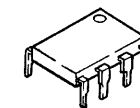
10E2N
1S1585



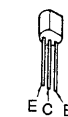
LA3160
M5128AL
 μ PC1237HA



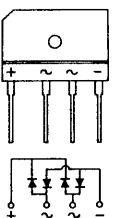
LB1639



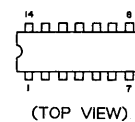
2SA733-QP
2SC945-QP
2SC1815-Y



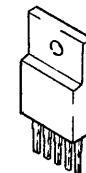
RBA-402
RBV-602-01



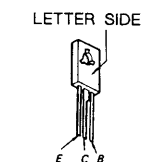
LC4966
MC14066BCP
TC4001BP
 μ PD4011BC



SI-18752N



2SC2682-QPE



SEL2210S-CD

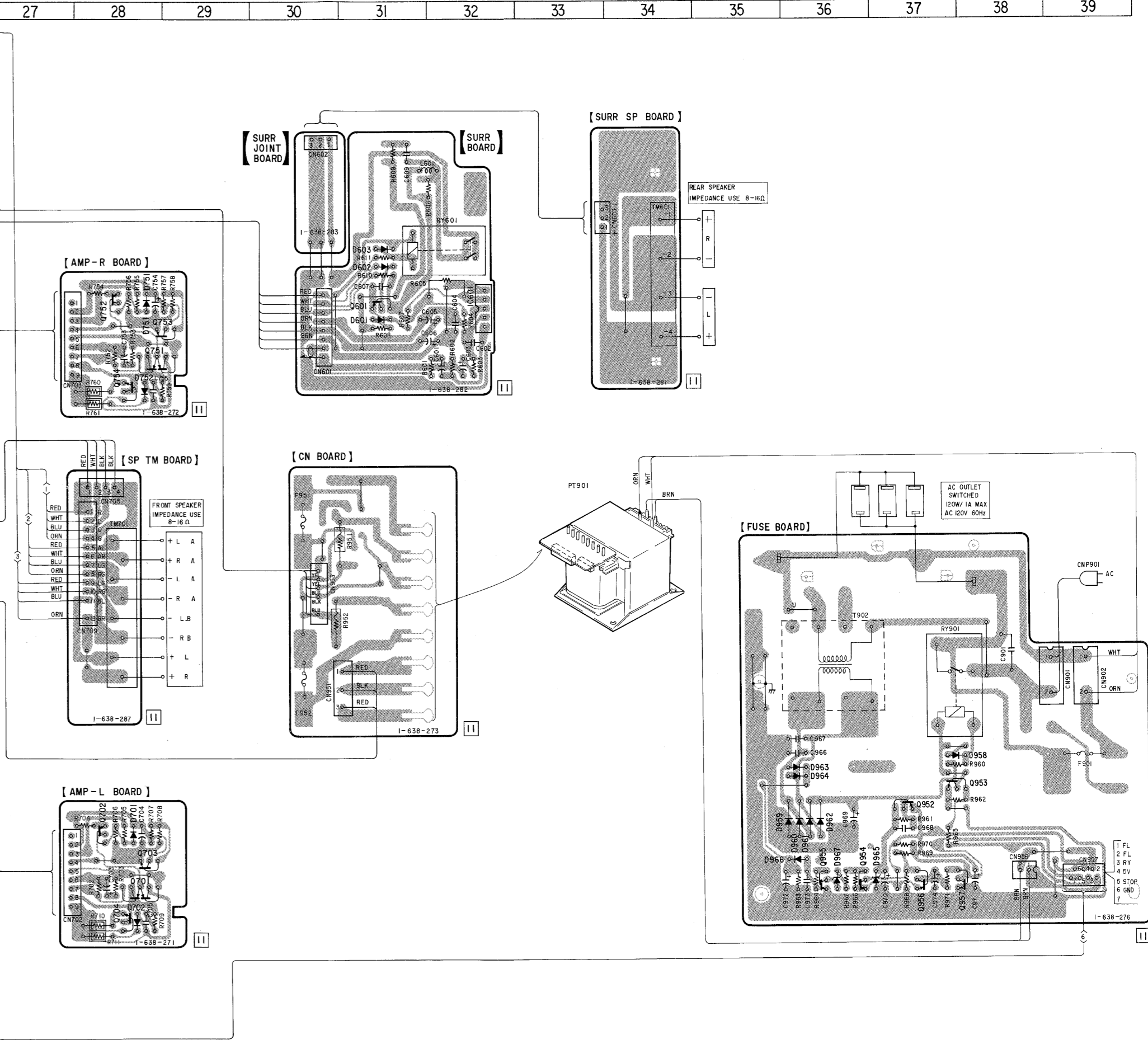
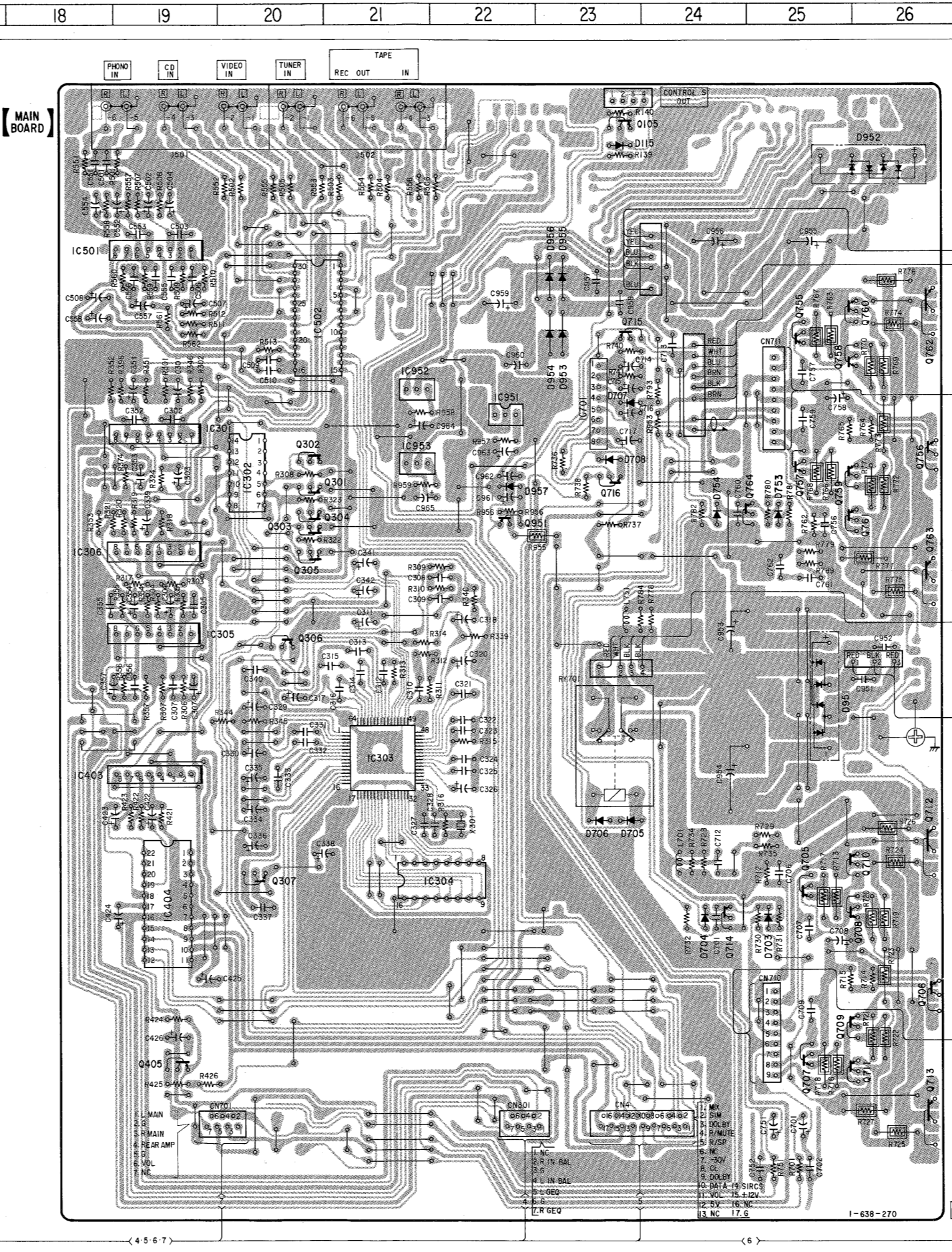
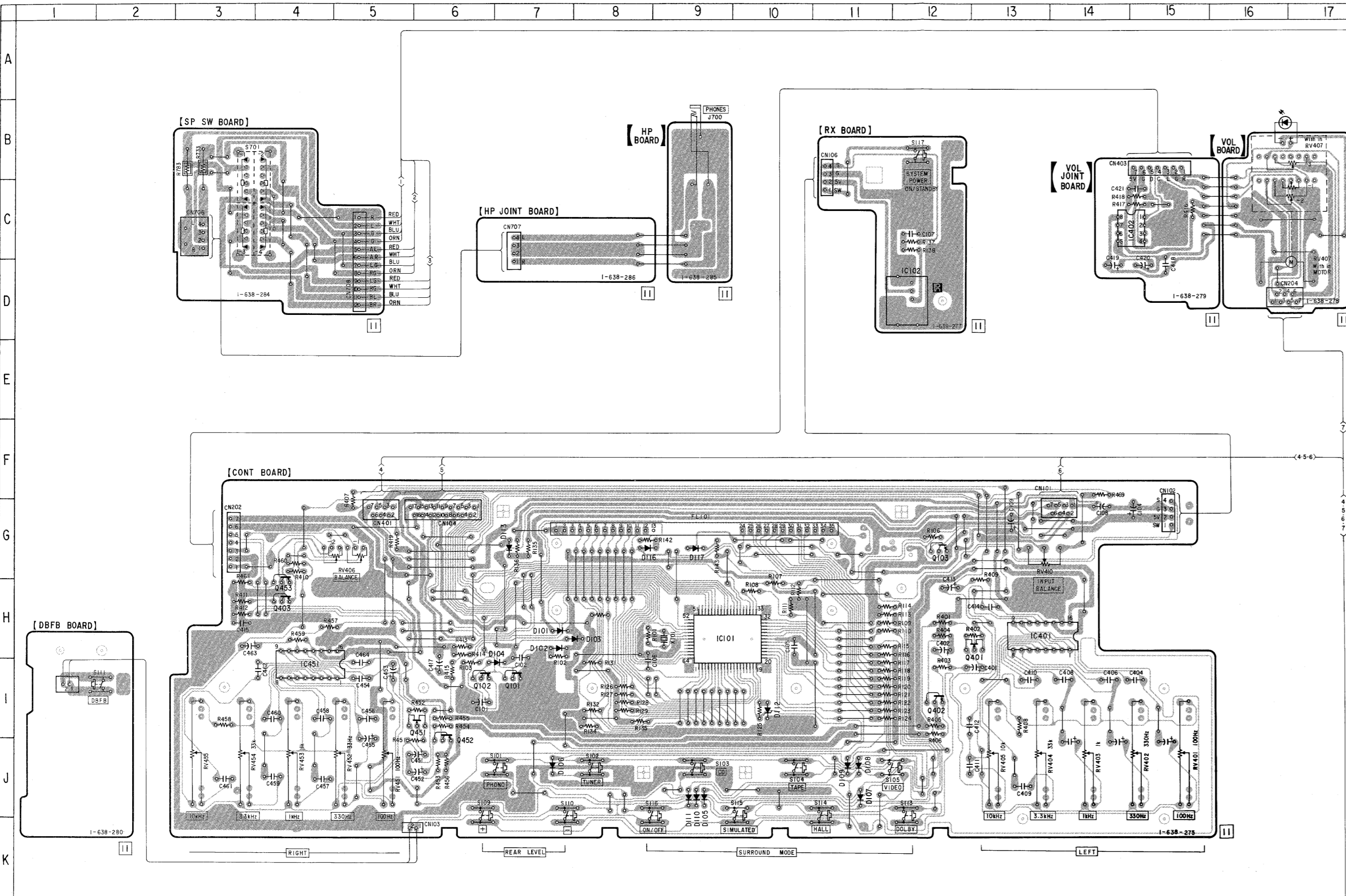


2-7. PRINTED WIRING BOARDS

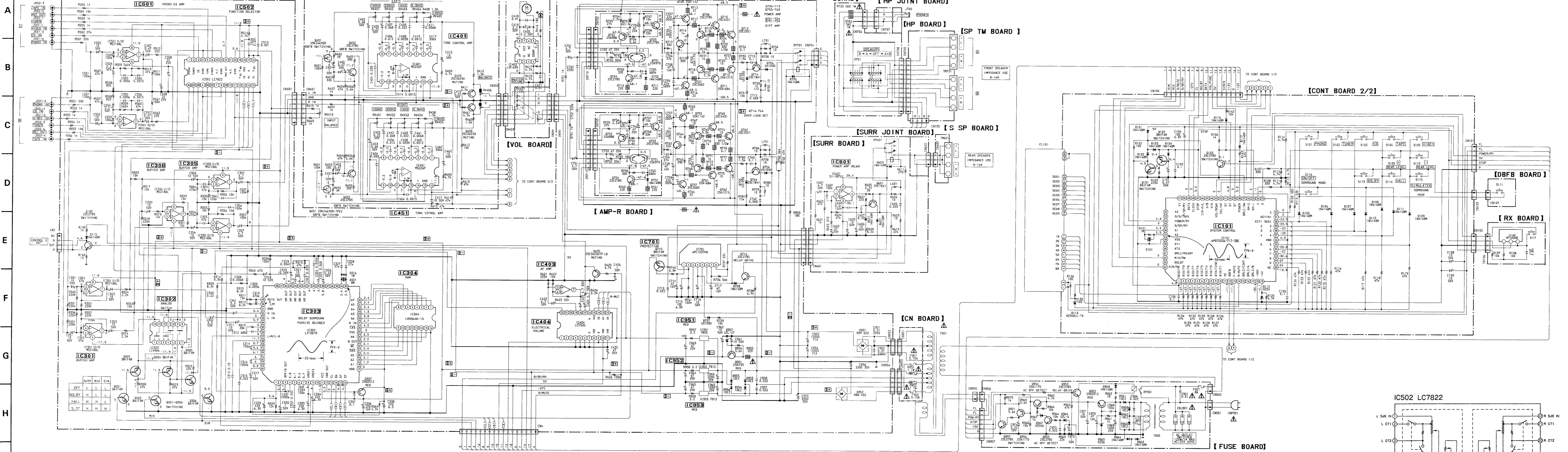
Semiconductor Location


Ref. No.	Location	Ref. No.	Location
D101	H-7	Q405	J-19
D102	H-7	Q451	I-6
D103	H-8	Q452	I-6
D104	H-7	Q453	I-6
D105	J-9	Q601	D-31
D106	J-7	Q701	J-28
D107	J-11	Q702	J-28
D108	J-11	Q703	J-28
D109	J-11	Q704	K-28
D110	J-9	Q705	I-25
D111	I-9	Q706	J-26
D112	I-10	Q707	J-25
D113	G-7	Q708	I-26
D115	B-23	Q709	J-26
D116	G-8	Q710	H-26
D117	G-9	Q711	J-26
D601	D-31	Q712	H-26
D602	C-31	Q713	K-26
D603	C-31	Q714	I-24
D701	J-28	Q715	C-23
D702	K-28	Q716	E-23
D703	I-25	Q751	D-28
D704	I-24	Q752	D-28
D705	H-23	Q753	D-28
D706	H-23	Q754	F-28
D707	H-23	Q755	D-25
D708	E-23	Q756	D-25
D751	D-28	Q757	E-25
D752	E-28	Q758	D-26
D753	E-25	Q759	E-26
D754	E-24	Q760	C-26
D951	G-25	Q761	E-26
D952	B-26	Q762	C-26
D953	C-23	Q763	E-26
D954	C-23	Q764	E-25
D955	C-23	Q951	E-22
D956	C-23	Q952	I-37
D957	I-37	Q954	J-36
D958	I-37	Q955	J-36
D959	J-36	Q956	J-36
D960	J-36	Q957	J-37
D961	J-36		
D962	J-36		
D963	I-36	IC101	H-9
D964	I-36	IC102	D-12
D965	J-37	IC301	D-19
D966	J-36	IC302	E-20
D967	J-36	IC303	G-21
		IC304	I-22
Q101	I-7	IC305	F-19
Q102	I-6	IC306	E-19
Q103	G-12	IC401	H-13
Q105	A-23	IC402	C-15
Q301	E-20	IC403	H-19
Q302	E-20	IC404	I-19
Q303	E-20	IC451	I-4
Q304	E-20	IC501	C-19
Q305	E-20	IC502	C-20
Q306	F-20	IC601	C-32
Q307	H-20	IC701	D-23
Q401	H-13	IC951	D-22
Q402	I-12	IC952	D-21
Q403	H-3	IC953	F-21

Note on Mounting Diagram:
● : parts extracted from the component side.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

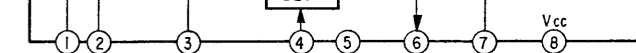
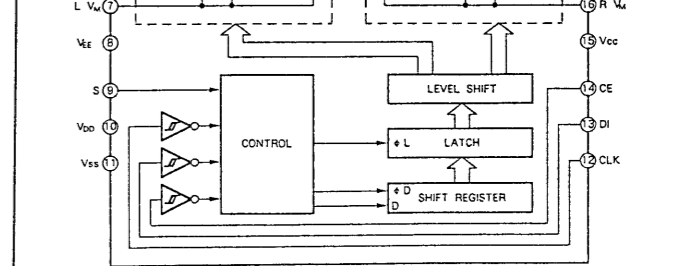
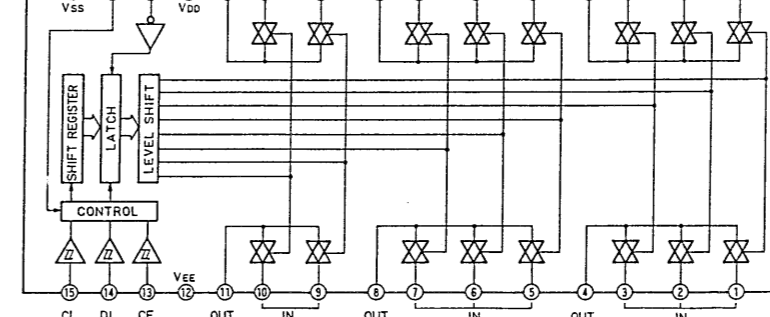
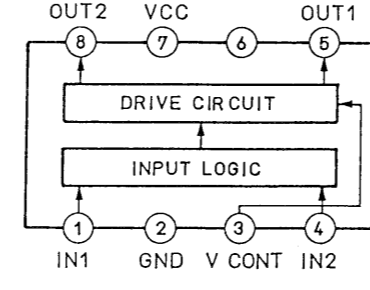
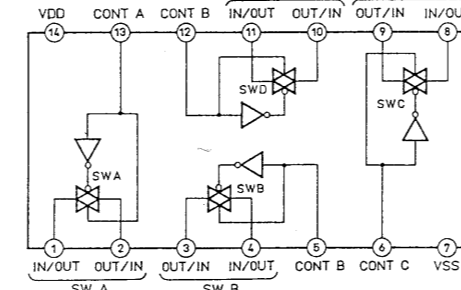


- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 : PHONO

2-9. IC BLOCK DIAGRAMS

IC302 LC4966

IC402 LB1639



SECTION 3

EXPLODED VIEWS

NOTE :



- -XX, -X mean standardized parts, so they may have some differences from the original one.

- Color Indication of Appearance Parts
Example :

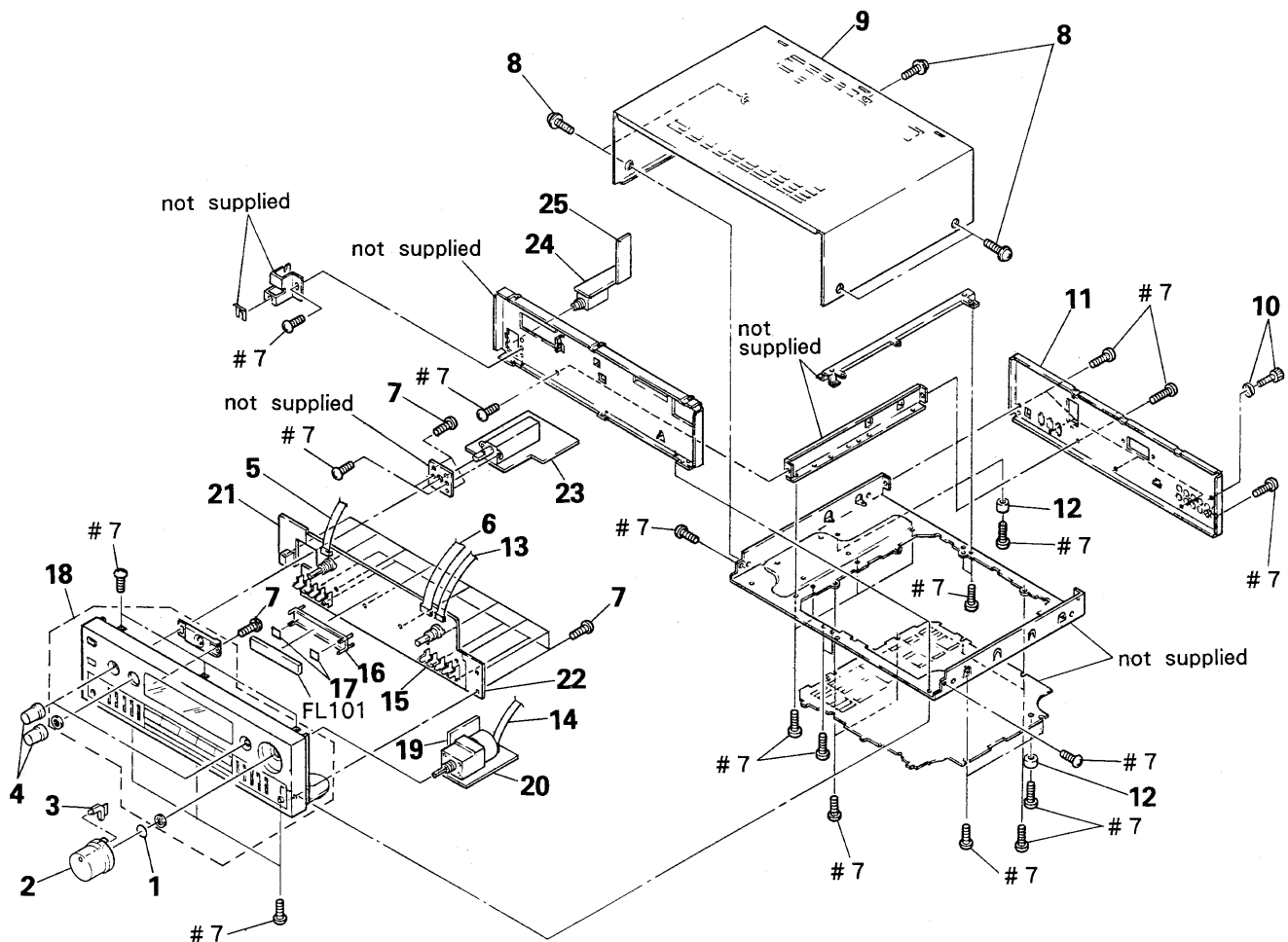
KNOB, BALANCE (WHITE)...(RED)

Parts color ↑ ↑ Cabinet's color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

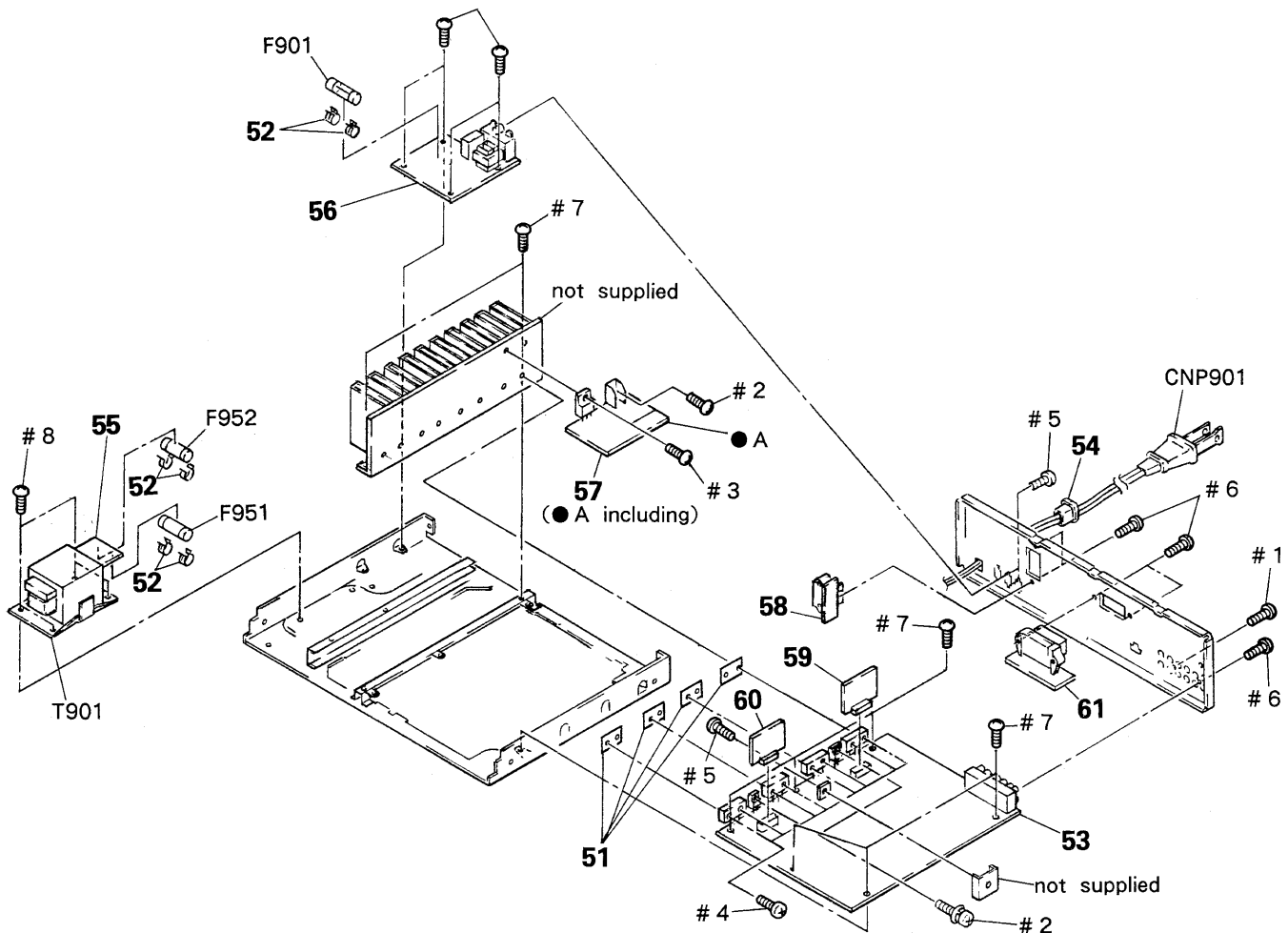
The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

3-1. OVERALL SECTION 1



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
1	3-350-426-01	SPRING, RING		13	1-590-538-11	WIRE, FLAT TYPE (7 CORE)	
2	4-943-091-01	KNOB (VOL)		14	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
3	4-943-092-01	PLATE(VOL), LIGHT GUIDE		15	* A-4341-682-A	CONT BOARD, COMPLETE	
4	4-943-420-01	KNOB (DIA. 19)		16	* 4-943-107-01	HOLDER (FL TUBE)	
5	1-590-486-11	WIRE, FLAT TYPE (7 CORE)		17	* 4-921-941-01	CUSHION (FL)	
6	1-590-487-11	WIRE, FLAT TYPE (17 CORE)		18	A-4323-854-A	PANEL ASSY, FRONT	
7	4-928-635-01	SCREW, +BV (2. 6X8) TAPPING		19	* 1-638-279-11	VOL JOINT BOARD	
8	3-704-366-01	SCREW (CASE) (M3X8)		20	* 1-638-278-11	VOL BOARD	
9	4-931-031-11	CASE		21	* 1-638-277-11	RX BOARD	
10	3-706-165-00	SCREW		22	* 1-638-280-11	DBFB BOARD	
11	* 4-943-458-01	PANEL, BACK		23	* 1-638-284-11	SP SW BOARD	
12	X-4941-229-1	FOOT ASSY (F2112S-M)		24	* 1-638-285-11	HP BOARD	
				25	* 1-638-286-11	HP JOINT BOARD	

3-2. OVERALL SECTION 2



Note: The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
51	4-885-901-31	SHEET, RADIATION	
52	1-533-217-31	HOLDER, FUSE	
53	* A-4341-678-A	MAIN BOARD, COMPLETE	
54	* 3-703-244-00	BUSHING (2104), CORD	
55	* 1-638-273-11	CN BOARD	
56	* 1-638-276-11	FUSE BOARD	
57	* 1-638-282-11	SURR BOARD (A including)	
58	* 1-638-287-11	SP, TM, BOARD	
59	* 1-638-272-11	AMP-R BOARD	

Ref. No.	Part No.	Description	Remark
60	* 1-638-271-11	AMP-L BOARD	
61	* 1-638-281-11	SURR SP BOARD	
CNP901	▲ 1-551-478-00	CORD, POWER	
F901	▲ 1-532-749-11	FUSE, GLASS TUBE (6A)	
F951	▲ 1-576-107-11	FUSE (3.15 A)	
F952	▲ 1-576-107-11	FUSE (3.15 A)	
T901	▲ 1-450-370-11	TRANSFORMER, POWER	

SECTION 4

ELECTRICAL PARTS LIST

AMP-L

AMP-R

CN

NOTE :

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...
- CAPACITORS:
uF: μ F
- COILS
uH: μ H

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
* 1-638-271-11 AMP-L BOARD *****				< CONNECTOR >			
< CAPACITOR >				CN703	1-560-943-00	PIN, CONNECTOR 9P	
C703	1-124-477-11	ELECT	47uF 20% 25V	< DIODE >			
C704	1-124-477-11	ELECT	47uF 20% 25V	D751	8-719-933-40	DIODE HZS6C2L	
C705	1-162-292-31	CERAMIC	680PF 10% 50V	D752	8-719-987-63	DIODE 1N4148M	
< CONNECTOR >				< TRANSISTOR >			
CN702	1-560-943-00	PIN, CONNECTOR 9P		Q751	8-729-620-18	TRANSISTOR 2SA979-FG	
< DIODE >				Q752	8-729-108-14	TRANSISTOR 2SA988-F	
D701	8-719-933-40	DIODE HZS6C2L		Q753	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D702	8-719-987-63	DIODE 1N4148M		Q754	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< TRANSISTOR >				< RESISTOR >			
Q701	8-729-620-18	TRANSISTOR 2SA979-FG		R752	1-249-435-11	CARBON 33K 5% 1/4W	
Q702	8-729-108-14	TRANSISTOR 2SA988-F		R753	1-249-408-11	CARBON 180 5% 1/4W	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE		R754	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE		R755	1-249-434-11	CARBON 27K 5% 1/4W	
< RESISTOR >				R756	1-249-426-11	CARBON 5.6K 5% 1/4W	
R702	1-249-435-11	CARBON 33K 5% 1/4W		R757	1-249-429-11	CARBON 10K 5% 1/4W	
R703	1-249-408-11	CARBON 180 5% 1/4W		R758	1-249-435-11	CARBON 33K 5% 1/4W	
R704	1-249-421-11	CARBON 2.2K 5% 1/4W		R759	1-249-411-11	CARBON 330 5% 1/4W	
R705	1-249-434-11	CARBON 27K 5% 1/4W		R760	Δ 1-247-704-11	CARBON 220 5% 1/4W	
R706	1-249-426-11	CARBON 5.6K 5% 1/4W		R761	Δ 1-247-704-11	CARBON 220 5% 1/4W	
R707	1-249-429-11	CARBON 10K 5% 1/4W		*****			
R708	1-249-435-11	CARBON 33K 5% 1/4W		* 1-638-273-11 CN BOARD *****			
R709	1-249-411-11	CARBON 330 5% 1/4W		< FUSE >			
R710	Δ 1-247-704-11	CARBON 220 5% 1/4W		F951	Δ 1-576-107-11	FUSE (3.15A)	
R711	Δ 1-247-704-11	CARBON 220 5% 1/4W		F952	Δ 1-576-107-11	FUSE (3.15A)	
*****				< RESISTOR >			
* 1-638-272-11 AMP-R BOARD *****				R951	Δ 1-217-469-00	FUSIBLE 1 5% 1W F	
< CAPACITOR >				R952	Δ 1-217-469-00	FUSIBLE 1 5% 1W F	
C753	1-124-477-11	ELECT	47uF 20% 25V	*****			
C754	1-124-477-11	ELECT	47uF 20% 25V				
C755	1-162-292-31	CERAMIC	680PF 10% 50V				

CONT

Ref. No.	Part No.	Description	Remarks
	* A-4341-682-A	CONT BOARD, COMPLETE *****	
	* 1-638-275-11	CONT BOARD	
	1-533-217-31	HOLDER, FUSE	
	1-569-132-11	PIN, CONNECTOR 7P	
	4-352-844-01	PIN, LEAD, COATING	
	* 4-921-941-01	CUSHION (FL)	
	* 4-943-107-01	HOLDER (FL TUBE)	
		< CAPACITOR >	
C101	1-124-902-00	ELECT 0.47uF 20% 50V	
C102	1-130-495-00	MYLAR 0.1uF 5% 50V	
C103	1-162-596-00	CERAMIC 0.022uF	
C104	1-124-443-00	ELECT 100uF 20% 10V	
C105	1-130-495-00	MYLAR 0.1uF 5% 50V	
C106	1-130-495-00	MYLAR 0.1uF 5% 50V	
C108	1-136-907-00	ELECT 10uF 5% 50V	
C109	1-136-907-00	ELECT 10uF 5% 50V	
C401	1-124-903-11	ELECT 1uF 20% 50V	
C402	1-124-902-00	ELECT 0.47uF 20% 50V	
C403	1-124-254-00	ELECT 0.68uF 20% 50V	
C404	1-130-490-11	MYLAR 0.039uF 5% 50V	
C405	1-124-464-11	ELECT 0.22uF 20% 50V	
C406	1-130-484-00	MYLAR 0.012uF 5% 50V	
C407	1-130-493-00	MYLAR 0.068uF 5% 50V	
C408	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C409	1-130-487-00	MYLAR 0.022uF 5% 50V	
C410	1-164-086-11	CERAMIC 0.0012uF 10% 50V	
C411	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C412	1-162-289-31	CERAMIC 390PF 10% 50V	
C413	1-124-907-11	ELECT 10uF 20% 50V	
C414	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
C415	1-136-169-00	FILM 0.22uF 5% 50V	
C417	1-124-907-11	ELECT 10uF 20% 50V	
C451	1-124-903-11	ELECT 1uF 20% 50V	
C452	1-124-902-00	ELECT 0.47uF 20% 50V	
C453	1-124-254-00	ELECT 0.68uF 20% 50V	
C454	1-130-490-11	MYLAR 0.039uF 5% 50V	
C455	1-124-464-11	ELECT 0.22uF 20% 50V	
C456	1-130-484-00	MYLAR 0.012uF 5% 50V	
C457	1-130-493-00	MYLAR 0.068uF 5% 50V	
C458	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C459	1-130-487-00	MYLAR 0.022uF 5% 50V	
C460	1-164-086-11	CERAMIC 0.0012uF 10% 50V	
C461	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C462	1-162-289-31	CERAMIC 390PF 10% 50V	
C463	1-124-907-11	ELECT 10uF 20% 50V	
C464	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
		< CONNECTOR >	
CN101	* 1-568-850-11	SOCKET, CONNECTOR 7P	
CN102	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P	
CN104	1-568-860-11	SOCKET, CONNECTOR 17P	
CN202	* 1-561-651-00	SOCKET, CONNECTOR 7P	
CN401	* 1-568-850-11	SOCKET, CONNECTOR 7P	
CN402	* 1-561-651-00	SOCKET, CONNECTOR 7P	

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D101	8-719-987-63	DIODE 1N4148M	
D102	8-719-987-63	DIODE 1N4148M	
D103	8-719-987-63	DIODE 1N4148M	
D104	8-719-987-63	DIODE 1N4148M	
D105	8-719-987-63	DIODE 1N4148M	
D106	8-719-987-63	DIODE 1N4148M	
D107	8-719-987-63	DIODE 1N4148M	
D108	8-719-987-63	DIODE 1N4148M	
D109	8-719-987-63	DIODE 1N4148M	
D110	8-719-987-63	DIODE 1N4148M	
D111	8-719-987-63	DIODE 1N4148M	
D112	8-719-985-53	DIODE HZS4ALL	
D113	8-719-985-53	DIODE HZS4ALL	
D116	8-719-987-63	DIODE 1N4148M	
D117	8-719-987-63	DIODE 1N4148M	
		< FILTER >	
FL101	1-519-663-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC101	8-759-154-40	IC uPD75206-717-3BE	
IC401	8-759-602-04	IC M5226P	
IC451	8-759-602-04	IC M5226P	
		< COIL >	
L731	* 1-420-872-00	COIL, AIR CORE	
		< TRANSISTOR >	
Q101	8-729-900-36	TRANSISTOR DTC124ES	
Q102	8-729-900-63	TRANSISTOR DTA124ES	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q401	8-729-224-61	TRANSISTOR 2SK246-Y	
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q451	8-729-224-61	TRANSISTOR 2SK246-Y	
Q452	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q453	8-729-141-30	TRANSISTOR 2SC3623A-LK	
		< RESISTOR >	
R101	1-247-903-00	CARBON 1M 5% 1/4W	
R102	1-249-429-11	CARBON 10K 5% 1/4W	
R103	1-247-895-00	CARBON 470K 5% 1/4W	
R106	1-249-417-11	CARBON 1K 5% 1/4W	
R107	1-249-411-11	CARBON 330 5% 1/4W	
R108	1-249-411-11	CARBON 330 5% 1/4W	
R109	1-249-411-11	CARBON 330 5% 1/4W	
R110	1-249-411-11	CARBON 330 5% 1/4W	
R111	1-249-425-11	CARBON 4.7K 5% 1/4W	
R112	1-249-425-11	CARBON 4.7K 5% 1/4W	
R113	1-249-425-11	CARBON 4.7K 5% 1/4W	
R114	1-249-425-11	CARBON 4.7K 5% 1/4W	
R115	1-249-437-11	CARBON 47K 5% 1/4W	
R116	1-249-437-11	CARBON 47K 5% 1/4W	
R117	1-249-437-11	CARBON 47K 5% 1/4W	

CONT

DBFB

FUSE

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R118	1-249-437-11	CARBON 47K 5% 1/4W		RV406	1-241-022-11	RES, VAR, CARBON 150K/150K (BALANCE)	
R119	1-249-437-11	CARBON 47K 5% 1/4W		RV410	1-238-777-11	RES, VAR, CARBON 250K (IN PUT BALANCE)	
R120	1-249-437-11	CARBON 47K 5% 1/4W		RV451	1-241-434-11	RES, VAR, SLIDE 250K (100Hz)	
R121	1-249-437-11	CARBON 47K 5% 1/4W		RV452	1-241-434-11	RES, VAR, SLIDE 250K (330Hz)	
R122	1-249-437-11	CARBON 47K 5% 1/4W		RV453	1-241-434-11	RES, VAR, SLIDE 250K (1KHz)	
R123	1-249-437-11	CARBON 47K 5% 1/4W		RV454	1-241-434-11	RES, VAR, SLIDE 250K (3.3KHz)	
R124	1-249-437-11	CARBON 47K 5% 1/4W		RV455	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)	
R125	1-249-425-11	CARBON 4.7K 5% 1/4W				(SWITCH)	
R126	1-249-437-11	CARBON 47K 5% 1/4W		S101	1-554-303-21	SWITCH, TACTILE (PHONO)	
R127	1-249-437-11	CARBON 47K 5% 1/4W		S102	1-554-303-21	SWITCH, TACTILE (TUNER)	
R128	1-249-437-11	CARBON 47K 5% 1/4W		S103	1-554-303-21	SWITCH, TACTILE (CD)	
R129	1-249-437-11	CARBON 47K 5% 1/4W		S104	1-554-303-21	SWITCH, TACTILE (TAPE)	
R130	1-249-437-11	CARBON 47K 5% 1/4W		S105	1-554-303-21	SWITCH, TACTILE (VIDEO)	
R131	1-249-437-11	CARBON 47K 5% 1/4W		S109	1-554-303-21	SWITCH, TACTILE (+)	
R132	1-249-437-11	CARBON 47K 5% 1/4W		S110	1-554-303-21	SWITCH, TACTILE (-)	
R133	1-249-437-11	CARBON 47K 5% 1/4W		S113	1-554-303-21	SWITCH, TACTILE (DOLBY)	
R134	1-249-437-11	CARBON 47K 5% 1/4W		S114	1-554-303-21	SWITCH, TACTILE (HALL)	
R135	1-249-405-11	CARBON 100 5% 1/4W		S115	1-554-303-21	SWITCH, TACTILE (SIMULATED)	
R136	1-249-405-11	CARBON 100 5% 1/4W		S116	1-554-303-21	SWITCH, TACTILE (ON/OFF)	
R142	1-249-429-11	CARBON 10K 5% 1/4W				(CRYSTAL)	
R143	1-249-437-11	CARBON 47K 5% 1/4W		X101	1-567-775-11	VIBRATOR, CERAMIC	
R401	1-249-441-11	CARBON 100K 5% 1/4W				*****	
R402	1-247-903-00	CARBON 1M 5% 1/4W		* 1-638-280-11	DBFB BOARD	*****	
R403	1-249-411-11	CARBON 330 5% 1/4W				(CONNECTOR)	
R404	1-249-437-11	CARBON 47K 5% 1/4W		CN107	* 1-568-951-11	PIN, CONNECTOR 2P	
R405	1-249-412-11	CARBON 390 5% 1/4W				(SWITCH)	
R406	1-249-426-11	CARBON 5.6K 5% 1/4W		S111	1-554-303-21	SWITCH, TACTILE (DBFB)	
R407	1-249-417-11	CARBON 1K 5% 1/4W				*****	
R408	1-249-419-11	CARBON 1.5K 5% 1/4W		* 1-638-276-11	FUSE BOARD	*****	
R409	1-249-425-11	CARBON 4.7K 5% 1/4W				(CAPACITOR)	
R410	1-249-419-11	CARBON 1.5K 5% 1/4W		C901	1-161-744-00	CERAMIC 0.01uF 400V	
R411	1-249-425-11	CARBON 4.7K 5% 1/4W		C966	1-130-487-00	MYLAR 0.022uF 5% 50V	
R412	1-249-429-11	CARBON 10K 5% 1/4W		C967	1-130-487-00	MYLAR 0.022uF 5% 50V	
R413	1-249-437-11	CARBON 47K 5% 1/4W		C968	1-162-282-31	CERAMIC 100PF 10% 50V	
R414	1-249-437-11	CARBON 47K 5% 1/4W		C969	1-124-557-11	ELECT 1000uF 20% 25V	
R415	1-249-437-11	CARBON 47K 5% 1/4W		C970	1-124-477-11	ELECT 47uF 20% 25V	
R419	1-249-417-11	CARBON 1K 5% 1/4W		C971	1-124-907-11	ELECT 10uF 20% 50V	
R451	1-249-441-11	CARBON 100K 5% 1/4W		C972	1-124-903-11	ELECT 1uF 20% 50V	
R452	1-247-903-00	CARBON 1M 5% 1/4W		C973	1-130-487-00	MYLAR 0.022uF 5% 50V	
R453	1-249-411-11	CARBON 330 5% 1/4W		C974	1-124-464-11	ELECT 0.22uF 20% 50V	
R454	1-249-437-11	CARBON 47K 5% 1/4W				(CONNECTOR)	
R455	1-249-412-11	CARBON 390 5% 1/4W		CN901	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
R456	1-249-426-11	CARBON 5.6K 5% 1/4W		CN902	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
R457	1-249-417-11	CARBON 1K 5% 1/4W		CN956	* 1-564-777-11	PLUG, CONNECTOR (2.5MM) 2P	
R458	1-249-419-11	CARBON 1.5K 5% 1/4W		CN957	* 1-568-826-11	SOCKET, CONNECTOR 7P	
R459	1-249-425-11	CARBON 4.7K 5% 1/4W		CNJ901	△1-540-062-11	OUTLET, AC	
R460	1-249-419-11	CARBON 1.5K 5% 1/4W					
R461	1-249-425-11	CARBON 4.7K 5% 1/4W					
R469	1-249-417-11	CARBON 1K 5% 1/4W					
		(VARIABLE RESISTOR)					
RV401	1-241-434-11	RES, VAR, SLIDE 250K (100Hz)					
RV402	1-241-434-11	RES, VAR, SLIDE 250K (330Hz)					
RV403	1-241-434-11	RES, VAR, SLIDE 250K (1KHz)					
RV404	1-241-434-11	RES, VAR, SLIDE 250K (3.3KHz)					
RV405	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)					

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

FUSE	HP	HP JOINT	MAIN
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Ref. No.	Part No.	Description	Remarks
< DIODE >			
D958	8-719-987-63	DIODE 1N4148M	
D959	8-719-200-77	DIODE 10E2N	
D960	8-719-200-77	DIODE 10E2N	
D961	8-719-200-77	DIODE 10E2N	
D962	8-719-200-77	DIODE 10E2N	
D963	8-719-987-63	DIODE 1N4148M	
D964	8-719-987-63	DIODE 1N4148M	
D965	8-719-933-41	DIODE HZS6C3L	
D966	8-719-933-41	DIODE HZS6C3L	
D967	8-719-985-53	DIODE HZS4ALL	
< FUSE >			
F901	△1-532-749-11	FUSE (6A)	
< TRANSISTOR >			
Q952	8-729-209-15	TRANSISTOR 2SD2012	
Q953	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q954	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q955	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q956	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q957	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R960	1-249-396-11	CARBON 18 5% 1/6W	
R961	1-249-417-11	CARBON 1K 5% 1/4W	
R962	1-249-437-11	CARBON 47K 5% 1/4W	
R963	1-249-433-11	CARBON 22K 5% 1/4W	
R964	1-249-429-11	CARBON 10K 5% 1/4W	
R965	1-249-425-11	CARBON 4.7K 5% 1/4W	
R966	1-249-429-11	CARBON 10K 5% 1/4W	
R967	1-249-417-11	CARBON 1K 5% 1/4W	
R968	1-249-429-11	CARBON 10K 5% 1/4W	
R969	1-249-426-11	CARBON 5.6K 5% 1/4W	
R970	1-249-417-11	CARBON 1K 5% 1/4W	
R971	1-249-426-11	CARBON 5.6K 5% 1/4W	
< RELAY >			
RY901	△1-515-701-11	RELAY (POWER)	
< TRANSFORMER >			
T902	△1-449-993-21	TRANSFORMER, POWER	

* 1-638-285-11	HP BOARD	*****	
< JACK >			
J700	1-568-515-21	JACK (LARGE TYPE) (PHONES)	

Ref. No.	Part No.	Description	Remarks
* 1-638-286-11	HP JOINT BOARD	*****	
< CONNECTOR >			
CN707	* 1-506-509-11	PIN, CONNECTOR 4P	

A-4341-682-A	MAIN BOARD, COMPLETE	*****	
* 1-638-270-11	MAIN BOARD		
1-533-217-31	HOLDER, FUSE		
* 4-942-204-01	PLATE, GROUND		
7-682-548-04	SCREW +BVT 3X8 (S)		
< CAPACITOR >			
C301	1-124-907-11	ELECT 10uF 20% 50V	
C302	1-162-215-31	CERAMIC 47PF 5% 50V	
C303	1-124-907-11	ELECT 10uF 20% 50V	
C304	1-124-907-11	ELECT 10uF 20% 50V	
C305	1-162-215-31	CERAMIC 47PF 5% 50V	
C306	1-162-282-31	CERAMIC 100PF 10% 50V	
C307	1-124-927-11	ELECT 4.7uF 20% 100V	
C308	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C309	1-130-480-00	MYLAR 0.0056uF 30% 50V	
C310	1-162-290-31	CERAMIC 470PF 10% 50V	
C311	1-124-907-11	ELECT 10uF 20% 50V	
C312	1-162-292-31	CERAMIC 680PF 10% 50V	
C313	1-130-497-00	MYLAR 0.15uF 5% 50V	
C314	1-162-284-31	CERAMIC 150PF 10% 50V	
C315	1-130-487-00	MYLAR 0.022uF 5% 50V	
C316	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C317	1-124-903-11	ELECT 1uF 20% 50V	
C318	1-124-907-11	ELECT 10uF 20% 50V	
C319	1-124-657-00	ELECT 10uF 20% 50V	
C320	1-124-907-11	ELECT 10uF 20% 50V	
C321	1-124-657-00	ELECT 10uF 20% 50V	
C322	1-130-489-00	MYLAR 0.033uF 5% 50V	
C323	1-161-377-00	CERAMIC 0.0047uF 30% 16V	
C324	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C325	1-130-493-00	MYLAR 0.068uF 5% 50V	
C326	1-124-464-11	ELECT 0.22uF 20% 50V	
C327	1-164-056-11	CERAMIC 27PF 5% 50V	
C328	1-164-056-11	CERAMIC 27PF 5% 50V	
C329	1-124-472-11	ELECT 470uF 20% 10V	
C330	1-124-903-11	ELECT 1uF 20% 50V	
C331	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C332	1-130-487-00	MYLAR 0.022uF 5% 50V	
C333	1-162-284-31	CERAMIC 150PF 10% 50V	
C334	1-126-176-11	ELECT 220uF 20% 10V	
C335	1-126-176-11	ELECT 220uF 20% 10V	
C336	1-126-118-11	ELECT 220uF 20% 16V	
C337	1-130-495-00	MYLAR 0.1uF 5% 50V	
C338	1-126-176-11	ELECT 220uF 20% 10V	
C339	1-124-907-11	ELECT 10uF 20% 50V	
C340	1-124-608-11	ELECT 0.22uF 20% 50V	

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C341	1-124-905-00	ELECT	3.3uF 50V	C957	1-130-487-00	MYLAR	0.022uF 5% 50V
C342	1-124-905-00	ELECT	3.3uF 50V	C958	1-130-487-00	MYLAR	0.022uF 5% 50V
C351	1-124-907-11	ELECT	10uF 20% 50V	C959	1-124-563-11	ELECT	2200uF 20% 25V
C352	1-162-215-31	CERAMIC	47PF 5% 50V	C960	1-124-557-11	ELECT	1000uF 20% 25V
C353	1-124-907-11	ELECT	10uF 20% 50V	C961	1-124-907-11	ELECT	10uF 20% 50V
C354	1-124-907-11	ELECT	10uF 20% 50V	C962	1-124-907-11	ELECT	10uF 20% 50V
C355	1-162-215-31	CERAMIC	47PF 5% 50V	C963	1-124-477-11	ELECT	47uF 20% 25V
C356	1-162-282-31	CERAMIC	100PF 10% 50V	C964	1-124-477-11	ELECT	47uF 20% 25V
C357	1-124-927-11	ELECT	4.7uF 20% 100V	C965	1-124-477-11	ELECT	47uF 20% 25V
C422	1-124-927-11	ELECT	4.7uF 20% 100V	< CONNECTOR >			
C423	1-124-927-11	ELECT	4.7uF 20% 100V	CN104	* 1-568-836-11	SOCKET, CONNECTOR 17P	
C424	1-124-927-11	ELECT	4.7uF 20% 100V	CN2	1-564-980-11	PIN, CONNECTOR 4P	
C425	1-124-477-11	ELECT	47uF 20% 25V	CN301	* 1-568-826-11	SOCKET, CONNECTOR 7P	
C426	1-124-903-00	ELECT	1uF 50V	CN701	* 1-568-826-11	SOCKET, CONNECTOR 7P	
C501	1-162-283-31	CERAMIC	120PF 10% 50V	CN710	* 1-563-192-11	CONNECTOR (SOCKET) 9P	
C502	1-124-907-11	ELECT	10uF 20% 50V	CN711	* 1-563-192-11	CONNECTOR (SOCKET) 9P	
C503	1-162-282-31	CERAMIC	100PF 10% 50V	< DIODE >			
C504	1-124-925-11	ELECT	2.2uF 20% 100V	D115	8-719-987-63	DIODE 1N4148M	
C505	1-130-480-00	MYLAR	0.0056uF 5% 50V	D703	8-719-815-85	DIODE 1S1585	
C506	1-161-374-11	CERAMIC	0.0015uF 20% 50V	D704	8-719-815-85	DIODE 1S1585	
C507	1-124-902-00	ELECT	0.47uF 20% 50V	D705	8-719-987-63	DIODE 1N4148M	
C508	1-126-233-11	ELECT	22uF 20% 50V	D706	8-719-987-63	DIODE 1N4148M	
C509	1-162-294-31	CERAMIC	0.001uF 10% 50V	D707	8-719-815-85	DIODE 1S1585	
C510	1-162-294-31	CERAMIC	0.001uF 10% 50V	D708	8-719-987-63	DIODE 1N4148M	
C548	1-124-468-00	ELECT	150uF 6.3V	D753	8-719-815-85	DIODE 1S1585	
C551	1-162-283-31	CERAMIC	120PF 10% 50V	D754	8-719-815-85	DIODE 1S1585	
C552	1-124-907-11	ELECT	10uF 20% 50V	D951	8-719-302-38	DIODE RBV-602-01	
C553	1-162-282-31	CERAMIC	100PF 10% 50V	D952	8-719-312-09	DIODE RBA-402	
C554	1-124-925-11	ELECT	2.2uF 20% 100V	D953	8-719-200-77	DIODE 10E2N	
C555	1-130-480-00	MYLAR	0.0056uF 5% 50V	D954	8-719-200-77	DIODE 10E2N	
C556	1-161-374-11	CERAMIC	0.0015uF 20% 50V	D955	8-719-200-77	DIODE 10E2N	
C557	1-124-902-00	ELECT	0.47uF 20% 50V	D956	8-719-200-77	DIODE 10E2N	
C558	1-126-233-11	ELECT	22uF 20% 50V	D957	8-719-934-21	DIODE HZS30-1L	
C701	1-124-927-11	ELECT	4.7uF 20% 100V	< IC >			
C702	1-162-286-31	CERAMIC	220PF 10% 50V	IC301	8-759-634-50	IC M5218AL	
C706	1-162-209-31	CERAMIC	27PF 5% 50V	IC302	8-759-801-01	IC LC4966	
C707	1-161-959-00	CERAMIC	22PF 10% 500V	IC303	8-759-823-63	IC LV1001M	
C708	1-124-477-11	ELECT	47uF 20% 25V	IC304	8-759-821-13	IC LM3364K-15	
C709	1-161-959-00	CERAMIC	22PF 10% 500V	IC305	8-759-634-50	IC M5218AL	
C710	1-130-495-00	MYLAR	0.1uF 5% 50V	IC306	8-759-634-50	IC M5218AL	
C712	1-130-493-00	MYLAR	0.068uF 5% 50V	IC403	8-759-634-50	IC M5218AL	
C713	1-130-487-00	MYLAR	0.022uF 5% 50V	IC404	8-759-820-11	IC LC7535	
C714	1-124-477-11	ELECT	47uF 20% 25V	IC501	8-759-634-50	IC M5218AL	
C715	1-124-443-00	ELECT	100uF 20% 10V	IC502	8-759-805-14	IC LC7822	
C716	1-124-907-11	ELECT	10uF 20% 50V	IC701	8-759-111-68	IC uPC1237HA	
C717	1-124-477-11	ELECT	47uF 20% 25V	IC951	8-759-231-53	IC M5F7805L	
C751	1-124-927-11	ELECT	4.7uF 20% 100V	IC952	8-759-604-33	IC M5F7812L	
C752	1-162-286-31	CERAMIC	220PF 10% 50V	IC953	8-759-604-51	IC M5F7912L	
C756	1-162-209-31	CERAMIC	27PF 5% 50V	< JACK >			
C757	1-161-959-00	CERAMIC	22PF 10% 500V	J501	1-580-826-11	JACK, PIN (Lch: PHONO, CD, VIDEO, TAPE, TUNER IN, REC OUT)	
C758	1-124-477-11	ELECT	47uF 20% 25V	J502	1-580-825-11	JACK, PIN (Rch: PHONO, CD, VIDEO, TAPE, TUNER IN, REC OUT)	
C759	1-161-959-00	CERAMIC	22PF 10% 500V				
C760	1-130-495-00	MYLAR	0.1uF 5% 50V				
C762	1-130-493-00	MYLAR	0.068uF 5% 50V				
C951	1-106-367-00	MYLAR	0.01uF 5% 200V				
C952	1-106-367-00	MYLAR	0.01uF 5% 200V				
C953	1-126-358-11	ELECT	10000uF 20% 71V				
C954	1-126-358-11	ELECT	10000uF 20% 71V				
C955	1-124-026-00	ELECT	3300uF 20% 35V				
C956	1-124-026-00	ELECT	3300uF 20% 35V				

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		(COIL)					
L701	* 1-420-872-00	COIL, AIR CORE		R314	1-249-423-11	CARBON 3. 3K 5% 1/4W	
L751	* 1-420-872-00	COIL, AIR CORE		R315	1-249-437-11	CARBON 47K 5% 1/4W	
		(TRANSISTOR)		R316	1-247-903-00	CARBON 1M 5% 1/4W	
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE		R317	1-249-429-11	CARBON 10K 5% 1/4W	
Q301	8-729-900-36	TRANSISTOR DTC124ES		R318	1-247-887-00	CARBON 220K 5% 1/4W	
Q302	8-729-900-63	TRANSISTOR DTA124ES					
Q303	8-729-900-36	TRANSISTOR DTC124ES		R319	1-249-429-11	CARBON 10K 5% 1/4W	
Q304	8-729-900-63	TRANSISTOR DTA124ES		R320	1-249-429-11	CARBON 10K 5% 1/4W	
Q305	8-729-900-36	TRANSISTOR DTC124ES		R321	1-249-429-11	CARBON 10K 5% 1/4W	
Q306	8-729-900-36	TRANSISTOR DTC124ES		R322	1-249-437-11	CARBON 47K 5% 1/4W	
Q307	8-729-209-15	TRANSISTOR 2SD2012		R323	1-249-437-11	CARBON 47K 5% 1/4W	
Q404	8-729-141-30	TRANSISTOR 2SC3623A-LK					
Q405	8-729-141-30	TRANSISTOR 2SC3623A-LK		R324	1-249-421-11	CARBON 2. 2K 5% 1/4W	
Q705	8-729-141-06	TRANSISTOR 2SA1142-QPE		R340	1-247-823-00	CARBON 470 5% 1/4W	
Q706	8-729-209-15	TRANSISTOR 2SD2012		R344	1-249-425-11	CARBON 4. 7K 5% 1/4W	
Q707	8-729-141-05	TRANSISTOR 2SC2682-QPE		R345	1-247-857-00	CARBON 12K 5% 1/4W	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		R351	1-247-887-00	CARBON 220K 5% 1/4W	
Q709	8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q710	8-729-141-46	TRANSISTOR 2SC4431-LK		R352	1-247-887-00	CARBON 220K 5% 1/4W	
Q711	8-729-141-37	TRANSISTOR 2SA1684-LK		R353	1-249-429-11	CARBON 10K 5% 1/4W	
Q712	8-729-320-96	TRANSISTOR 2SC2921-OPY		R354	1-247-895-00	CARBON 470K 5% 1/4W	
Q713	8-729-320-75	TRANSISTOR 2SA1215-0Y		R355	1-249-429-11	CARBON 10K 5% 1/4W	
Q714	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R356	1-249-429-11	CARBON 10K 5% 1/4W	
Q715	8-729-900-63	TRANSISTOR DTA124ES					
Q716	8-729-119-78	TRANSISTOR 2SC2785-HFE		R357	1-249-441-11	CARBON 100K 5% 1/4W	
Q755	8-729-141-06	TRANSISTOR 2SA1142-QPE		R374	1-249-421-11	CARBON 2. 2K 5% 1/4W	
Q756	8-729-209-15	TRANSISTOR 2SD2012		R420	1-249-429-11	CARBON 10K 5% 1/4W	
Q757	8-729-141-05	TRANSISTOR 2SC2682-QPE		R421	1-247-887-00	CARBON 220K 5% 1/4W	
Q758	8-729-119-78	TRANSISTOR 2SC2785-HFE		R422	1-249-429-11	CARBON 10K 5% 1/4W	
Q759	8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q760	8-729-141-46	TRANSISTOR 2SC4431-LK		R423	1-247-863-11	CARBON 22K 5% 1/4W	
Q761	8-729-141-37	TRANSISTOR 2SA1684-LK		R424	1-249-421-11	CARBON 2. 2K 5% 1/4W	
Q762	8-729-320-96	TRANSISTOR 2SC2921-OPY		R425	1-249-425-11	CARBON 4. 7K 5% 1/4W	
Q763	8-729-320-73	TRANSISTOR 2SA1215-0Y		R426	1-249-441-11	CARBON 100K 5% 1/4W	
Q764	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R501	1-249-411-11	CARBON 330 5% 1/4W	
Q951	8-729-141-03	TRANSISTOR 2SA733-QP					
		(RESISTOR)		R502	1-247-865-11	CARBON 27K 5% 1/4W	
R139	1-249-417-11	CARBON 1K 5% 1/4W		R503	1-249-429-11	CARBON 10K 5% 1/4W	
R140	1-249-393-11	CARBON 10 5% 1/4W		R504	1-249-417-11	CARBON 1K 5% 1/4W	
R301	1-247-887-00	CARBON 220K 5% 1/4W		R505	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-247-887-00	CARBON 220K 5% 1/4W		R506	1-249-417-11	CARBON 1K 5% 1/4W	
R303	1-249-429-11	CARBON 10K 5% 1/4W					
R304	1-247-895-00	CARBON 470K 5% 1/4W		R507	1-249-437-11	CARBON 47K 5% 1/4W	
R305	1-249-429-11	CARBON 10K 5% 1/4W		R508	1-249-416-11	CARBON 820 5% 1/4W	
R306	1-249-429-11	CARBON 10K 5% 1/4W		R509	1-247-897-11	CARBON 560K 5% 1/4W	
R307	1-249-441-11	CARBON 100K 5% 1/4W		R510	1-249-437-11	CARBON 47K 5% 1/4W	
R308	1-249-437-11	CARBON 47K 5% 1/4W		R511	1-249-441-11	CARBON 100K 5% 1/4W	
R309	1-249-428-11	CARBON 8. 2K 5% 1/4W					
R310	1-249-428-11	CARBON 8. 2K 5% 1/4W		R512	1-249-409-11	CARBON 220 5% 1/4W	
R311	1-249-431-11	CARBON 15K 5% 1/4W		R513	1-249-425-11	CARBON 4. 7K 5% 1/4W	
R312	1-249-428-11	CARBON 8. 2K 5% 1/4W		R551	1-249-411-11	CARBON 330 5% 1/4W	
R313	1-249-436-11	CARBON 39K 5% 1/4W		R552	1-247-865-11	CARBON 27K 5% 1/4W	
				R553	1-249-429-11	CARBON 10K 5% 1/4W	
				R554	1-249-417-11	CARBON 1K 5% 1/4W	
				R555	1-249-417-11	CARBON 1K 5% 1/4W	
				R556	1-249-417-11	CARBON 1K 5% 1/4W	
				R557	1-249-437-11	CARBON 47K 5% 1/4W	
				R558	1-249-416-11	CARBON 820 5% 1/4W	
				R559	1-247-897-11	CARBON 560K 5% 1/4W	
				R560	1-249-437-11	CARBON 47K 5% 1/4W	
				R561	1-249-441-11	CARBON 100K 5% 1/4W	
				R562	1-249-409-11	CARBON 220 5% 1/4W	
				R701	1-249-417-11	CARBON 1K 5% 1/4W	
				R712	1-249-435-11	CARBON 33K 5% 1/4W	
				R713	△1-247-692-11	CARBON 22 5% 1/4W	
				R714	1-249-417-11	CARBON 1K 5% 1/4W	
				R715	1-249-412-11	CARBON 390 5% 1/4W	
				R716	△1-247-692-11	CARBON 22 5% 1/4W	

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

MAIN	RX	SP SW	SP TM
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Ref. No.	Part No.	Description	Remarks
R717	△1-247-688-11	CARBON 10 5% 1/4W	
R718	△1-247-688-11	CARBON 10 5% 1/4W	
R719	△1-247-719-11	CARBON 3.3K 5% 1/4W	
R720	△1-247-713-11	CARBON 1K 5% 1/4W	
R721	△1-247-713-11	CARBON 1K 5% 1/4W	
R722	△1-247-717-11	CARBON 2.2K 5% 1/4W	
R723	△1-247-745-11	CARBON 330 5% 1/2W	
R724	△1-247-688-11	CARBON 10 5% 1/4W	
R725	△1-247-688-11	CARBON 10 5% 1/4W	
R726	△1-214-789-00	RES, METAL PLATE 0.1	
R727	△1-214-789-00	RES, METAL PLATE 0.1	
R728	1-249-393-11	CARBON 10 5% 1/4W	
R729	1-249-393-11	CARBON 10 5% 1/4W	
R730	1-249-419-11	CARBON 1.5K 5% 1/4W	
R731	1-249-431-11	CARBON 15K 5% 1/4W	
R732	1-249-437-11	CARBON 47K 5% 1/4W	
R734	1-249-393-11	CARBON 10 5% 1/4W	
R735	1-249-393-11	CARBON 10 5% 1/4W	
R736	1-249-438-11	CARBON 56K 5% 1/4W	
R737	1-249-433-11	CARBON 22K 5% 1/4W	
R738	1-249-425-11	CARBON 4.7K 5% 1/4W	
R739	1-249-429-11	CARBON 10K 5% 1/4W	
R751	1-249-417-11	CARBON 1K 5% 1/4W	
R762	1-249-435-11	CARBON 33K 5% 1/4W	
R763	△1-247-692-11	CARBON 22 5% 1/4W	
R764	1-249-417-11	CARBON 1K 5% 1/4W	
R765	1-249-412-11	CARBON 390 5% 1/4W	
R766	△1-247-692-11	CARBON 22 5% 1/4W	
R767	△1-247-688-11	CARBON 10 5% 1/4W	
R768	△1-247-688-11	CARBON 10 5% 1/4W	
R769	△1-247-719-11	CARBON 3.3K 5% 1/4W	
R770	△1-247-713-11	CARBON 1K 5% 1/4W	
R771	△1-247-713-11	CARBON 1K 5% 1/4W	
R772	△1-247-717-11	CARBON 2.2K 5% 1/4W	
R773	△1-247-745-11	CARBON 330 5% 1/2W	
R774	△1-247-688-11	CARBON 10 5% 1/4W	
R775	△1-247-688-11	CARBON 10 5% 1/4W	
R776	△1-214-789-00	RES, METAL PLATE 0.1	
R777	△1-214-789-00	RES, METAL PLATE 0.1	
R778	1-249-393-11	CARBON 10 5% 1/4W	
R779	1-249-393-11	CARBON 10 5% 1/4W	
R780	1-249-419-11	CARBON 1.5K 5% 1/4W	
R781	1-249-431-11	CARBON 15K 5% 1/4W	
R782	1-249-438-11	CARBON 56K 5% 1/4W	
R784	1-249-393-11	CARBON 10 5% 1/4W	
R789	1-249-393-11	CARBON 10 5% 1/4W	
R953	1-247-813-11	CARBON 180 5% 1/4W	
R955	△1-247-704-11	CARBON 220 5% 1/4W	
R956	1-249-426-11	CARBON 5.6K 5% 1/4W	
R957	1-249-385-11	CARBON 2.2 5% 1/6W	
R958	1-249-385-11	CARBON 2.2 5% 1/6W	
R959	1-249-385-11	CARBON 2.2 5% 1/6W	
		< RELAY >	
RY701	1-515-741-11	RELAY	
		< CONNECTOR >	
TP701	* 1-560-531-00	PIN, CONNECTOR 5P	

Ref. No.	Part No.	Description	Remarks
		< CRYSTAL >	
X301	1-577-157-11	VIBRATOR, CERAMIC (8MHz)	

	* 1-638-277-11	RX BOARD	

		< CAPACITOR >	
C107	1-162-294-31	CERAMIC 0.001uF 10% 50V	
		< CONNECTOR >	
CN106	* 1-565-295-11	PLUG, CONNECTOR 4P	
		< IC >	
IC102	8-749-920-83	IC GP1U52XB	
		< RESISTOR >	
R137	1-249-429-11	CARBON 10K 5% 1/4W	
R138	1-249-429-11	CARBON 10K 5% 1/4W	
		< SWITCH >	
S117	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	

	* 1-638-284-11	SP SW BOARD	

		< CONNECTOR >	
CN706	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P	
CN708	1-506-786-11	PLUG, CONNECTOR (2.5mm) 12P	
		< RESISTOR >	
R733	△1-216-431-11	METAL OXIDE 560 5% 1W F	
R783	△1-216-431-11	METAL OXIDE 560 5% 1W F	
		< SWITCH >	
S701	1-572-685-11	SWITCH, ROTARY SLIDE (SPEAKER)	

	* 1-638-287-11	SP TM BOARD	

		< CONNECTOR >	
CN705	* 1-564-778-11	PLUG, CONNECTOR (2.5mm) 4P	
		< TERMINAL >	
TM701	1-537-341-11	TERMINAL BOARD (8P SP)	

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

SURR	SURR SP	VOL	VOL JOINT
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Ref. No.	Part No.	Description	Remarks
	* 1-638-282-11	SURR BOARD *****	
		< CAPACITOR >	
C601	1-124-927-11	ELECT 4.7uF 20% 100V	
C602	1-162-282-31	CERAMIC 100PF 10% 50V	
C603	1-124-477-11	ELECT 47uF 20% 25V	
C604	1-130-483-00	MYLAR 0.01uF 5% 50V	
C605	1-124-907-11	ELECT 10uF 20% 50V	
C606	1-124-907-11	ELECT 10uF 20% 50V	
C607	1-136-171-00	MYLAR 0.33uF 5% 50V	
C609	1-130-489-00	MYLAR 0.033uF 5% 50V	
		< CONNECTOR >	
CN601	* 1-506-710-11	PLUG, CONNECTOR (2.5MM) 8P	
CN602	* 1-565-835-11	SOCKET, CONNECTOR 3P	
		< DIODE >	
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-987-63	DIODE 1N4148M	
D603	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC601	8-759-502-32	IC SI-18752N	
		< TRANSISTOR >	
Q601	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
		< RESISTOR >	
R601	1-249-417-11	CARBON 1K 5% 1/4W	
R602	1-249-437-11	CARBON 47K 5% 1/4W	
R603	1-247-817-11	CARBON 270 5% 1/4W	
R604	1-249-437-11	CARBON 47K 5% 1/4W	
R605	△1-217-151-00	RES, METAL PLATE 0.22	
R606	1-247-688-11	CARBON 10 5% 1/4W	
R607	1-247-815-11	CARBON 220K 5% 1/4W	
R608	1-247-853-11	CARBON 8.2K 5% 1/4W	
R609	1-247-688-11	CARBON 10 5% 1/4W	
R610	1-249-437-11	CARBON 47K 5% 1/4W	
R611	1-247-817-11	CARBON 270 5% 1/4W	
		< RELAY >	
RY601	1-515-790-11	RELAY (REAR SP)	

	* 1-638-281-11	SURR SP BOARD *****	
		< CONNECTOR >	
CN603	* 1-560-666-00	PIN, CONNECTOR 3P	
		< TERMINAL >	
TM601	* 1-537-265-11	TERMINAL BOARD (REAR SPEAKER)	

Ref. No.	Part No.	Description	Remarks
	* 1-638-278-11	VOL BOARD *****	
		< CONNECTOR >	
CN204	* 1-568-826-11	SOCKET, CONNECTOR 7P	
		< VARIABLE RESISTOR >	
RV407	1-241-413-11	RES, VAR, CARBON 100KX3 (MASTER VOLUME)	

	* 1-638-279-11	VOL JOINT BOARD *****	
		< CAPACITOR >	
C418	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C419	1-124-925-11	ELECT 2.2uF 20% 100V	
C420	1-124-925-11	ELECT 2.2uF 20% 100V	
C421	1-162-306-11	CERAMIC 0.01uF 20% 16V	
		< CONNECTOR >	
CN403	1-569-132-11	7P	
		< IC >	
IC402	8-759-820-62	IC LB1639	
		< RESISTOR >	
R416	1-247-813-11	CARBON 180 5% 1/4W	
R417	1-249-425-11	CARBON 4.7K 5% 1/4W	
R418	1-249-425-11	CARBON 4.7K 5% 1/4W	

		MISCELLANEOUS *****	
5	1-590-486-11	WIRE, FLAT TYPE (7 CORE)	
6	1-590-487-11	WIRE, FLAT TYPE (17 CORE)	
13	1-590-538-11	WIRE, FLAT TYPE (7 CORE)	
14	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
CNP901	△1-551-478-00	CORD, POWER	
T901	△1-450-370-11	TRANSFORMER, POWER	

		ACCESSORY & PACKING MATERIAL *****	
	1-465-711-11	REMOTE COMMANDER (RM-U212)	
	3-707-584-01	COVER, BATTERY	
	3-753-099-21	MANUAL, INSTRUCTION (ENGLISH)	
	* 4-943-619-01	INDIVIDUAL CARTON	
	* 4-943-620-01	CUSHION	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
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HARDWARE LIST

# 1	7-621-849-00	SCREW, TAPPING	
# 2	7-682-548-09	SCREW +B 3X8	
# 3	7-682-949-01	SCREW +PSW 3X10	
# 5	7-682-950-01	SCREW +PSW 3X12	
# 6	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
# 7	7-682-548-04	SCREW +BVTT 3X8 (S)	
# 8	7-682-561-04	SCREW +BVTT 4X8 (S)	

TA-AV411

SONY[®] SERVICE MANUAL

US Model

CORRECTION-1

Correct your service manual as shown below.

Correct the part No. as shown below

Page	INCORRECT	CORRECT	
	<u>Part No.</u>	<u>Part No.</u>	<u>Description</u>
32	A-4341-682-A	* A-4341-678-A	MAIN BOARD, COMPLETE

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.